Gulstonian Lectures
ON
ANÆMIA.

Delivered before the Royal College of Physicians,

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LECTURE I.—PART I.

Impoverishment of Blood with regard to Hæmoglobin the essential fact in Anæmia—This may be Quantitative or Qualitative—Analysis of Blood in Chlorosis—Methods of Estimation of Hæmoglobin—Malassez, Hayem, Gowers, Quinquad—The Red Corpuscles: Variations in number, size, and form; their development, destruction, and renewal—Share taken by Lymphatic Glands, Spleen, Bone-marrow, and Liver (?) in the work of Blood Formation—The Hæmatoblasts of Hayem.

MR. PRESIDENT AND GENTLEMEN,—In selecting as the subject of these lectures which I have the honour of delivering before you a condition so commonly and widely prevalent as Anæmia, I fear that I have undertaken a task which is not easy of fulfilment. For around this subject there clings much obscurity, owing to our lack of knowledge; and it would require far more profound analysis than I can hope to give to illumine its dark places. I do not bring you any original researches, and I cannot discuss the question in all its bearings; but if by a simple exposition of what I conceive to be the directions in which the solution of its problems lie I can fulfil a useful purpose, I shall be satisfied. For the subject is one worthy of attention; and in this College where the memory of Harvey, the student of the circulatory mechanism, is ever kept green, it is surely fitting that we should now and again review our knowledge of those conditions in which the blood plays so prominent a part. It is a truism to say that the integrity of the blood is essential to the performance of healthy function; and as disease is in great measure only disordered function, it is plain that such disorder may be determined by, as it must determine, changes in the circulating medium itself. There are some diseases in which defects in the blood stand out in sharp relief, but the more deeply the nature of disease is inquired into, the more clearly is it manifest that the blood—the mobile tissue pervading every part of the organism, and essential for its proper working—must be modified by any departure from the normal. The modification thus induced may be almost infinitesimal—it may be, in a sense, simply necessary to maintain the life of the individual when placed under abnormal conditions; or it may be so profound as seriously to interfere with the vital processes, and be the ultimate if not the proximate cause of death. Thus in anæmia we pass insensibly over the margin of health to disease—to the very confines of the latter's territory—the limit placed by death.

Naturally the greatest interest—for here lies the deepest obscurity—centres in the etiology of this condition, and my object to-day will be to consider facts concerning the blood and the part it plays in the economy with the view of illustrating the varied manner in which the anæmic state may be brought about. Without attempting to give a definition of anæmia other than that it is a condition of the blood in which its composition is so defective that it cannot sufficiently fulfil its respiratory and nutritive functions—implying, that is, a lowering of its standard composition in those elements which are destined to promote oxidation, to accelerate tissue-change, and repair tissue-waste—I must in the first place say a little concerning the blood itself, and in doing so must crave indulgence for venturing to repeat facts so well known.

The blood consists of the fluid part or plasma and the formed elements or corpuscles, the latter constituting rather more than one-third of the whole by weight. The corpuscles contain about 50 per cent. of water, their main solid constituent being the albuminoid crystallisable substance hæmoglobin associated in the coloured corpuscles with a minute quantity of iron, between 0·4 and 0·5 per cent. The serum, on the other hand, is composed of 90 per cent. of water, 8 to 9 per cent. of proteids, and 2 to 1 per cent. of fats, extractives, and saline matters (Foster). Then there is the curious circumstance in the inorganic constituents—viz., the preponderance of potash salts and phosphates in the corpuscles as compared with a parallel excess of soda salts and chlorides in the serum. (See Tables I. and II.)

TABLE I.—*Mean Chemical Composition of Blood.*
(BECQUEREL and RODIER.)

	In Health.		In Chlorosis.
	Adult Male.	Adult Female.	
Water	780	791	828·2
Solids	220	209	171·8
Fibrin	2·2	2·2	3·4
Albumen ...	69·4	70·5	72·1
Corpuscles ...	140·0	127·2	86·0
Extractives & Salts	6·8	7·2	8·8
Fatty matters	1·6	1·9	1·5

TABLE II.—*Plasma.* (SCHMIDT.)

1000 parts contain:

Water 901·51			
Solids 98·49	Fibrin	8·06	
	Album. & extr.	81·92	
	Salts	8·51—viz.,	
		Pot. chlorid.	0·559
		Sod. chlorid.	5·546
		Sod. sulph...	0·281
		Sod. phosp...	0·271
		Sod. carb. ...	1·532
		Calc. phosph.	0·298
		Mag. phosph.	0·218

Corpuscles. (SCHMIDT.)

1000 parts contain:

Water 618·63			
Solids 318·37	Hæmatin	15·02	
	Globulin	296·07	
	Salts	7·28—viz.,	
		Pot. chlorid.	3·679
		Pot. phosph.	2·343
		Pot. sulph...	0·132
		Sod. phosph.	0·693
		Sod. carb. ...	0·134
		Calc. phosph.	0·094
		Mag. phosph.	0·060

Analyses show, therefore, that the corpuscular elements form the greater part of the solids of the blood, and it thus follows that the hæmoglobin is by far the most abundant of its albuminoid constituents.

True anæmia of course implies a diminution in all these blood constituents—a condition only obtaining, and that in a transitory manner, after profuse and sudden hæmorrhage, the quantity of fluid lost being made up by a rapid osmosis of water from the tissues. The blood in that case becomes hydræmic, as it may do in the later stages of a chronic anæmia where there has been loss or destruction of the albuminoids of the serum. The consideration of such rapid and extreme forms of anæmia as those produced by sudden and severe hæmorrhage does not enter into my programme, except as serving to illustrate the various phases of anæmia, whether primary or secondary. The most marked fact in such anæmia is the impoverishment of the blood in its albuminous constituents, especially in the hæmoglobin—an impoverishment which may be owing to an actual diminution in the quantity of this substance, but which is also very probably due to a qualitative change in it, whereby it is rendered unable to subserve its chief office, that of conveying oxygen to the tissues. At present there is but little known concerning this latter modification.[1] Attention has been mainly directed to the alterations in *amount* of hæmoglobin and of the albuminoids, and it is found that the diminution in these constituents is accompanied to a definite, but a com-

[1] It has been lately argued with much force by Drs. M. P. Jacobi and White (Archives of Medicine, 1880) that in anæmia the organised albuminoids of the body, including the corpuscular hæmoglobin, are all functionally inactive, and are rendered unable to condense oxygen and to store albumen in sufficient quantity for the needs of the organism. This is the most explicit statement, I know of, of the view that the change in the hæmoglobin may be not simply a quantitative, but a *qualitative*, one.

paratively small, extent by an increase in the saline matters, and generally also by an increase in the water of the blood. I have placed before you (Tables III. and IV.) certain

TABLE III.—*Mean Composition of Blood (1000 parts).*

	In Health. (Lecanu.)	In Chlorosis. (Andral & Gavarret.) Incipient.	Fully developed.
Water	790·0	801·0	853·2
Solids	210·0	199·0	146·8
Fibrin	3·0	3·5	2·9
Corpuscles	127·0	106·8	56·7
Solid resid. of serum	80·0	88·0	88·0

TABLE IV.—*Anæmia with Amenorrhœa.* (Beale.)
(Treated by Citrate of iron.)

	Fifth Day.	Thirty-fifth Day.	Sixty-fifth Day.
Water	865·28	836·46	829·49
Solids	134·72	163·54	170·51
Fibrin	2·52	1·28	2·69
Corpuscles	49·29	78·73	85·79
Solids of serum	82·91	83·53	82·03
	(Salts, 7·54.)		(Salts, 8·205.)

analysis of blood in *chlorosis*, which show that in that form of anæmia, at any rate, the reduction of solids is mainly in the corpuscular part of the blood, and *not* in the serum; and there are abundant analyses made in more recent days which show that the reduction is almost entirely that of the hæmoglobin. The contrast between this deficiency and the normal, or even excessive, amount of serum-albumen in this disease has been adduced as evidence of the essential difference between this form of anæmia and other forms. It seems doubtful, however, whether it is wise to base the distinction upon such a narrow ground as this, seeing that in the all-important feature of anæmia—that of deficiency of hæmoglobin,—chlorosis takes the chief place.

So important is this constituent that in endeavouring to analyse the etiological side of anæmia, and to explain the effects of the condition, inquiry may be almost concentrated upon the variations of hæmoglobin to the exclusion of the other blood elements. Consequently many methods have been devised for determining as accurately as possible the absolute and relative quantities of hæmoglobin in the blood. These methods severally consist in (1) the determination of the amount of iron in the corpuscles, it being found to be in constant proportion to the amount of hæmoglobin; (2) in the spectroscopic appearances given by solutions of hæmoglobin of various degrees of concentration; (3) in the absorptive capacity of a given quantity of blood for oxygen; and (4) in the comparative determination of the amount of colouring matter by contrasting a solution of blood of known strength with certain standard colours or coloured substances corresponding to the tint of a solution of normal blood. This last is the simplest and readiest of all the methods, although not quite as accurate as some of the others where larger quantities of blood are dealt with. It is to Messrs. Hayem and Malassez that we owe the introduction of these methods, and the simple apparatus devised by Dr. Gowers modifying the latter's method is before you. I have placed on the table specimens of blood of different degrees of anæmia, illustrating this method, where the standard of comparison represents the colour of 20 c.mm. of normal blood diluted 100 times. In that way the percentage amount of hæmoglobin may be estimated, but the absolute quantity has been determined by some of the other methods. Of these I may especially mention that carried out by Quinquad, who, availing himself of the reducing properties of sodic hydrosulphite was enabled to calculate the maximum quantity of oxygen capable of being absorbed by a given sample of blood. The mean capacity in health, he found, was 240 cubic centimetres of oxygen to every 1000 grammes of blood, and as estimations by iron show that hæmoglobin contains 0·43 per cent. of that metal, and that 1000 grammes of blood contained 0·53 grammes of iron, it follows that the quantity of hæmoglobin capable of absorbing the above amount of oxygen must be 128 grammes. (See Table V.) M. Quinquad has therefore assumed that hæmoglobin invariably has this absorptive capacity for oxygen, and has applied this method of determination to estimate the hæmoglobin in various diseases. In the main his results accord with the older and more elaborate analyses, as well as with those obtained by the colour-methods. For example, he found that in chlorosis the hæmogoblin suffers absolute diminution to a greater extent than in any other disease, except pernicious anæmia and cancer, but that the solid matters of the serum were very slightly if at all reduced—a

TABLE V.—*Estimation of Hæmoglobin and its capacity for Oxygen. Mean of four observations.*
(Quinquad.)

	Amount of Hæmoglobin in 1000 cc. of Blood.	Amount of Oxygen absorbed by 1000 cc. of Blood.
Adult male	130 grms.	250 cc.
Adult female	114·2 grms.	225 cc.
Old man	105·8 grms.	205 cc.

result similar to that I have recently quoted. The obvious objection to the method is that it does not allow for alterations in the quality of the hæmoglobin of a given specimen of blood, which would alter its capacity for absorbing oxygen. Another difficulty arising in regard to most of the methods of absolute determination lies in the discrepancies liable to creep in in the minute calculations they involve, a criticism which applies with equal force to all methods of blood-numeration and analyses of small quantities of blood. Thirdly, all these methods are imperfect in that they, of necessity, tell nothing of the total amount of the blood, which may be much impoverished as a whole, but which, owing to alterations in density may apparently yield a normal or even excessive amount of colouring matter and corpuscles. These points were well illustrated in a recent paper by Drs. Baxter and Willcocks,[2] and enforce the lesson that the results of these methods of estimation can only be dealt with in a relative sense; and that a very slight deviation may lead to great error in the total result.

It is impossible, however, to deal with alterations in hæmoglobin without inquiring into the natural history of the red corpuscles themselves, which are so largely composed of this substance. This we may now proceed briefly to consider. We may expect to find variations in the number, size, form, and evolution of those elements to be associated with the anæmic state; for in general terms this state depends either on a numerical deficiency in these corpuscles, or a deficiency in their hæmoglobin, or on both these conditions.

The number of coloured corpuscles in a cubic millimetre of blood is on an average 5,000,000 for the adult male, and 4,500,000 for the female. These figures, originally calculated by Vierordt and Welcker, have been confirmed of late years by the process of numeration by means of the hæmocytometer invented by Hayem and introduced into this country in a modified form by Dr. Gowers. Their precise accuracy has been questioned, some asserting that they are too high, others that they are too low—discrepancies depending partly, perhaps, on instrumental errors and partly upon the variations which occur in the healthy subject in relation to food, to the greater or less concentration of the plasma, to the region from which the blood is taken, or the state of contraction of the vessel yielding it. At the same time these figures represent sufficiently well the average of health, and serve well enough as standards of comparison. Mere numeration, however, is misleading as an indication of the blood value; the hæmoglobin also must be taken into account, and we can hardly have a better example than in chlorosis, where, with a much diminished quantity of hæmoglobin, the number of corpuscles is often but slightly, if at all, below the normal. It has, therefore, been an object to determine the actual quantity of hæmoglobin falling to each corpuscle. Malassez especially has attempted this, so as to express the corpuscular richness in terms of hæmoglobin, and the hæmoglobin in terms of corpuscular richness (Table VI.), and he has quite lately further perfected his

TABLE VI.—*Hæmoglobin and Corpuscles.* (Malassez.)

	No. of Corp. per cub. mm.	Qty. of Hgbn. per cub. mm.	Qty. of Hgbn. per Corpuscle.
Chlorosis	3,600,000	0·038	10·53 $\mu\mu$ gr.[3]
Chlorosis	2,800,000	0·048	17·14 ,,
Ditto 1 month after treatment	3,300,000	0·062	18·78 ,,
Anæmia	4,000,000	0·086	21·56 ,,
Essential anæmia	1,830,000	0·033	16·66 ,,

method, whereby it can be clearly shown the corpuscles in pathological conditions may contain a greater proportionate

[2] THE LANCET, vol. I., 1880, pp. 361, 397, and 439.

[3] The sign $\mu\mu$ gr. = $\frac{1}{1000000}$ of $\frac{1}{1000000}$ of a gramme, and is employed to obviate the inconvenience of dealing with a large number of zeros in decimals.

amount of hæmoglobin than in health, and the converse. He has shown also that the size of the corpuscle does not determine the amount of the hæmoglobin either in the animal series or in disease in man (see Tables VII. and VIII.)

TABLE VII.—*Hæmoglobin and Size of Corpuscles.*
(MALASSEZ.)

	Amt. of Hæmoglob. per Corpuscles.	Size of Corpuscles.	Amt. of Hæmoglob. per 1 μ cub. of Corp. Subst.
Man ...	30 $\mu\mu$ gr.	72	0·416 $\mu\mu$ gr.
Pigeon ...	52 ,,	125	0·416 ,,
Lizard ...	70 ,,	201	0·348 ,,
Frog ...	216 ,,	629	0·343 ,,
Proteus ...	1066 ,,	9200	0·115 ,,

TABLE VIII.—*Hæmoglobin and Size of Corpuscles.*
(MALASSEZ.)

	Richness in Hæmoglobin.		Diameter of Corpuscles.	
	Absolute.	Relative.	Absolute.	Relative.
Cancer ...	13 $\mu\mu$ gr.	0·43	6·64	0·87
Chlorosis ...	22·7 ,,	0·75	8·29	1·09
Normal ...	30 ,,	1·0	7·60	1·0

Changes in corpuscular value are seen whenever one calculates the number of corpuscles and estimates the quantity of hæmoglobin; but although in one specimen 4,000,000 corpuscles with a percentage of 30 of hæmoglobin will be equivalent to 2,000,000 with 60 per cent., as regards the total quantity of colouring matter; it must be borne in mind that the respiratory or nutritive value—in other words, the functional value—of the one may be greater than the other owing to the difference in the number of the elements, or to difference in their size.

The size of the coloured corpuscles (diameter of $\frac{1}{3500}$ to $\frac{1}{3000}$ of an inch or 7·7 μ.) is a tolerably constant quantity in health, but in anæmic conditions it is common to find very many corpuscles much below the averages. The smaller spherical coloured elements, which have received the name of microcytes, are often abundant in anæmic blood. They may represent immature forms of the red corpuscle; and I shall have to mention yet smaller elements, upon the presence of which great stress is laid by M. Hayem in speaking of the development of the blood. More than one authority has declared that the corpuscles in chlorosis are larger than those in health, and that in cancer they are plainly smaller—changes which, if occurring, might be related to the nature of the intimate substance of the corpuscle, where also may be found explanations for changes in form as well as size.

For the characteristic discoid shape is (except in the case of the microcytes just mentioned) very little altered in the living state, although after removal from the body, under the influence of reagents, &c., they undergo many changes of shape. Considerable, and perhaps undue, stress has been laid upon the form-changes in corpuscles in the severe cases of idiopathic anæmia, of which they have been made almost a pathognomonic feature. In so far as they indicate a certain degree of instability, fragility, and proneness to decay of the corpuscles, or some altered relations between the plasmic fluid and the viscous globule, such curious alterations in shape may be suggestive of a profound blood-change. But more than this we are not warranted in saying.

Great interest attaches to these corpuscles in respect to their development in the embryo, their subsequent formation, destruction, and renewal; and it cannot be said that our knowledge is yet complete with respect to these matters. Their bearings upon the subject of anæmia are manifestly so important that I must not leave this part of my subject without alluding to them. The primitive blood-cells arise directly from the mesoblastic elements within the developing bloodvessels. These embryonic coloured corpuscles are nucleated, and in early fœtal life the blood is largely composed of such nucleated corpuscles, which gradually disappear with the further development of the body. As soon as the liver and spleen are differentiated the formation of these corpuscles takes place within these organs, although it is not confined to them, the connective tissue cells giving rise to red corpuscles formed out of their protoplasm (Schäfer). There seems no reason why this latter process should not go on in the growing organism after birth, together with the new formation of bloodvessels. In adult life it is generally believed that the coloured corpuscles are developed from the colourless cells of the lymph, the transformation taking place partly in the general circulation, but largely in those organs which are specially devoted to the formation of the corpuscles of the blood—the spleen, lymphatic glands, bone-marrow, and liver. The splenic pulp contains cell elements of different kinds, lymphoid corpuscles of various sizes, red corpuscles, intermediate forms and certain peculiar blood-corpuscle-holding cells, which may represent a stage in the final involution of the red discs, or indicate their evolution from lymphoid cells. As to the lymphatic glands, their *rôle* is evident. The hæmatogenous function of the bone-marrow first described by Neumann twelve years ago is now generally admitted. It was founded on the resemblance of this tissue (especially in young subjects, where it is more vascular, redder, and less fatty than in later life) and its vascular supply to the splenic pulp, containing, as it does, lymphoid cells, cells with coloured nuclei, forming transitional elements between the lymphoid and red corpuscles. The relative abundance of this tissue in youth accords with a like degree of development of cytogenic tissue elsewhere in the body, and affords a contrast in the reparative power, often bloodless at that period as compared with later ages. Hence an explanation for alterations in the corpuscular richness of the blood has been sought in changes in the bone-marrow when the other organs of sanguification have appeared to be unaffected. The liver, which in the embryo undoubtedly is a source of the coloured corpuscles, is by many considered to play a part in blood-formation throughout life, but there does not appear to be yet sufficient proof of this.

One other point of interest concerning the formation of the blood-corpuscles must be mentioned. M. Hayem, who has paid much attention to the subject, and whose observations include not only human blood, but the blood in all classes of vertebrata, has described "hæmatoblasts" of a somewhat different kind from those which are recognised in the marrow or spleen. These are small, rudimentary blood discs furnished by the lymph together with the leucocytes, but so transparent and fragile as to escape observation unless the blood be promptly examined at a freezing temperature or "fixed" by reagents. They are faintly coloured, and in size vary from one-sixth to two-thirds that of the fully formed corpuscles, to which they bear a tolerably constant proportion—viz., one to twenty, being thus considerably in excess of the leucocytes. The existence of small granular masses in the blood has long been noticed, and I have already mentioned the occurrence of smaller forms of red corpuscles, which are regarded by Hayem as intermediary between the very immature hæmatoblast and the completely developed corpuscle; but it is at least singular that these hæmatoblasts, so numerous as they are, should have been so long overlooked by histologists. I may add that their discoverer not only attributes great importance to them in the development of the blood, and regards their presence in undue amount as evidence of incomplete evolution of the blood, as in chlorosis, but asserts that they play a leading part in the formation of fibrin.

Incomplete as our knowledge is as to the precise manner in which the coloured corpuscles are renewed in the blood, it is even less certain as regards the manner of their destruction, and as to their duration as independent, functionally-active elements. For their function is not simply that of carriers of oxygen to the tissues; they also furnish products to secreting glands, and in so doing must be considered to suffer destruction, just as in certain glands—e.g., the mammary,—the cells perish in giving rise to their peculiar product. Indeed, from analogy there would seem to be nothing peculiar in the continued destruction and re-formation of blood-corpuscles; for, although it may be true that a secreting cell often has a certain stability, and after yielding up its product is once more enabled to draw fresh material and convert it to its peculiar secretion, yet there must be a limit to cell life and a renewal of cells in place of those rendered effete by repeated acts of secretion. In the case of the blood there is evidence of the rapidity of renewal of its elements in the increase in corpuscles following ingestion of food, in the diminution during fasting, in the repair of the blood after menstrual loss, or after profuse hæmorrhage, and, indeed, in recovery from anæmia of any kind. M. Hayem, finding the immature corpuscles, or hæmatoblasts, to stand in a constant numerical proportion to the fully formed corpuscles, sees in this evidence of continual change to maintain this ratio, whilst, on the other hand, Quincke, in some recent researches upon artificially induced plethora, has estimated the duration of a red corpuscle to be almost two weeks. There are not, however, sufficient data to re-

move this interesting point from the region of speculation. We know that the material of the corpuscles is constantly being excreted from the body or deposited in the tissues, and we infer that this implies a destruction of the corpuscle. The actual seat of this destruction is not founded on much surer ground. The spleen has been long regarded as the place where such a regressive change takes place; its richness in iron, its peculiar nucleated cells containing colouring matter, suggest this; and yet the blood of the splenic vein is richer in corpuscles than its artery; so that if the spleen is the seat of their destruction it must also be the seat of their renewal—possibly building up new corpuscles from the relics of the old; besides sending forth also abundance of leucocytes, to undergo further transformation into the coloured elements. However this may be, there is less uncertainty as regards the liver, which seems to be the chief seat of the destruction of red corpuscles; for not only does the blood passing out of this organ contain comparatively fewer corpuscles than that entering it, but its cells are laden with pigment derived from the blood, which they excrete with but little modification in the bile, of which one pigment, the bilirubin, is identical with the iron-free hæmatoidin. Lastly, the urinary pigment must also be derived from the blood; but I do not know whether its precise seat of separation has been determined. [Under certain conditions, probably concerned as much with derangements in the circulation of the kidney as with any actual change in the blood itself, the hæmoglobin will transude into the urine unaltered. Such are the cases of so-called intermittent hæmatinuria, apparently sometimes associated with malarial influences. The appearance of indican, especially abundant in diseases of the alimentary tract, in the urine has relations probably to imperfect changes in assimilation; but its occurrence in anæmia has also been declared, and is suggested to point to some relation with the deficiency of blood in colouring matter.] Lastly, in conditions of artificially induced plethora, and in pernicious anæmia, Quinquad has found a great excess of iron taken up by leucocytes and gland cells in the liver, kidney, and other organs.

Having dwelt at such length upon the red corpuscles, it will not, I hope, be concluded that I wish to ignore the other blood constituents, or the part which their diminution plays in the production of anæmia. But it is because the essence of anæmia lies in the impoverishment of the blood in colouring matter that I have said so little about the other constituents, nor do they need much exposition. The white corpuscles may have other functions than that of giving rise to the coloured corpuscles; they may take part in the renewal of other tissues and cells, but of this we have no concern to-day. In so far as they give rise to the coloured elements, any hindrance to their transformation or arrest of it must deprive the blood of its chief constituent. Dr. Cavafy's interesting research, which points to the leucocytes in leukhæmia being incapable of further transformation, is suggestive of the link between this blood condition and that of pure anæmia.

Then as to the albuminates of the serum and the salts, I have before intimated that they suffer change in anæmic conditions; but I must reiterate my conviction that, as compared with the hæmoglobin, they play but a minor part in the symptoms or effects of anæmia. It is impossible to dissociate them from the condition, for their changes are certainly factors of importance in its etiology; and yet there may be, as in chlorosis, all the evidence of anæmia, with no diminution, but even an excess, of those constituents of the blood.

SCOTCH MEDICAL RELIEF GRANTS.—A deputation from Edinburgh, Glasgow, and other Scotch towns, have had an interview with the Lord Advocate recently at the Home Office on the subject of the grant from the Imperial Exchequer in aid of medical relief for the poor of Scotland, and to urge that the grant should be increased so as to equalise it with the same grants for England and Ireland. The allowance at present made was £10,000 per annum to Scotland, while England received £210,500, and Ireland £71,500, being a half of their actual expenditure; whereas the grant to Scotland was less than one-fourth of its total expenditure. The Lord Advocate promised to arrange with Lord Frederick Cavendish for an interview, by deputation, with the Premier on the subject.

MR. ALEXANDER JONES, late of Walbrook, bequeathed £200 to the Jews Hospital, Norwood.

THE PATHOGENY AND TREATMENT OF BRONCHOCELE OR GOITRE.[1]

BY EDWARD WOAKES, M.D. LOND.

THE following observations are mainly based upon the experience of goitrous patients who have attended my outpatient department at the Throat Hospital during the last four or five years. The cases in which the treatment by fluoric acid was adopted and continued to the end are twenty in number. Of these seventeen recovered and three failed to receive benefit from the drug. There are besides preliminary notes of seventeen other patients who attended from one to three times only. These form no part of the series, though they furnish information of an etiological kind, to which allusion will be subsequently made. My notes of about fifteen other cases were destroyed by the carelessness of a porter in charge of the hospital out-patient letters; these, therefore, are not included in the report, as, owing to this misadventure, I have no reliable data to quote from. With regard to the cases themselves, they were not selected for the purposes of treatment, every case of the disease that presented itself being similarly dealt with. This was done with the view of testing the influence, if any, of fluoric acid upon this particular disease. With this object before me, all accessory methods of treatment have been avoided, though it has happened that such accessory treatment has been in one or two instances temporarily added, as when during my absence the patients have been seen by some one unacquainted with my design. Such additions have been speedily eliminated, and were so slight as scarcely to affect the result, except perhaps in Case 10. Speediness of cure has, therefore, been sacrificed to the sole aim of ascertaining first of all whether fluoric acid exercised any remedial influence over the disease.

Before proceeding to further details it may be desirable to discuss the reasons which induced me to select this particular remedy for the purposes in view. As the decision of this point involves principles of fundamental importance, applicable alike to every new attempt to expand the domain of therapeutic resource, I feel the less reluctance in stating briefly in what these principles consist. The first has reference to the pathogeny of bronchocele. The more we consider this subject the more clearly will it appear that the point of departure in the morbid process consists in a paresis of the vaso-motor nerves which mediate the vessel area constituted by the thyroid gland. We shall further localise this paresis, as regards its source, in the sympathetic ganglia from which these vessel nerves issue, and accept as the outcome of such paresis a chronic state of vessel dilatation as regards the area in question. Such a passive augmentation of the blood-supply of the organ expresses itself first in the form of a simple expansion of the normal dimensions of the gland, which then presents a somewhat undefined spongy mass, very compressible, and variable as regards its proportions. Such passive hyperæmias of the thyroid body are not unfrequently seen in the course of certain disorders which complicate that part of the vascular system with which the vessels proper to it are in intimate anatomical relationship. Thus it seems to act as a diverticulum or reservoir for storing away a certain amount of blood, which, if not thus disposed of, would, in the conditions referred to, prove embarrassing to organs of more vital import. It appears to me impossible to recognise any *raison d'être* for the existence of this elastic body at the root of the neck, and in immediate relationship with the great arterial highways to the brain, unless it be viewed in connexion with its vaso-motor associations. The nature of this correlationship will be illustrated by reference to one of them—viz., that by which the vertebral artery, contributing so largely to the intercranial circulation, is located as regards its origin close to the inferior thyroid artery; and, which appears of more importance, that both these trunks derive their vaso-motor nerves from the same sympathetic subcentre, the inferior cervical ganglion. The arrangement is

[1] A paper read before the Medical Society of London, Feb. 21st, 1881.

such that a vaso-motor impression proceeding from the ganglion would be likely to influence both these arteries at the same time; that is to say, supposing a dilator wave to be projected upon the vertebral artery, that going to the thyroid gland would participate in it. Under these circumstances, a portion of the blood propelled by the heart into the now dilatable vessels would be immediately drafted off by one of them, and received into a distensible receptacle, the thyroid body, and by so much will the pressure on the vertebral artery be diminished, and the additional amount of blood which would otherwise have been forwarded to the brain will be withheld.

It seems therefore highly probable that, owing to this distribution of vaso-motor nerves, the thyroid body is designed to subserve such a mechanical and protective function with regard to the intercranial circulation as I have above indicated, quite irrespective of its physiological purpose in the economy. Obviously such an accretion of blood cannot be indefinitely prolonged without entailing the consequences of hyper-nutrition upon the tissues of the organ in which it takes place. Hence the commonest or rather earliest phase of the disease is a soft and compressible tumour caused by exudative accessions to the unorganised constituents of the gland. It is now called "simple goitre." Later on the connective tissue constituting the stroma of the gland participates in the process, and undergoes changes of a hypertrophic character, causing the tumour to become denser and more resistant on palpation. In this stage it is called "fibrous goitre"; but it is common to see these two forms in different parts of the gland in the same subject, suggesting that the earlier phase is passing on to the later one. Frequently, when the patient is first seen, the disease has become pronouncedly "fibrous."

I need not dwell upon the simple cystic and the fibro-cystic aspects of bronchocele; neither need I discuss certain anomalous and rare forms of the disease, which, notwithstanding their extreme interest, are not concerned with my present purpose, which is to show a theory of the inception of the ordinary phases of the disease, and which theory led up to the treatment.

The adoption of a vaso-motor origin of the disease disposes of the views which refer it to some peculiar taint introduced into the system through the agency of drinking-water &c. from the soil—a theory which long held sway. The following considerations oppose themselves to this latter view. An examination of the localities in which my patients lived and acquired their goitrous proclivities shows that out of forty cases in which this point is recorded thirty resided in London or its suburbs, the remainder being contributed by the counties of Hertford, Oxford, Berks, Beds, Bucks, Hants, Essex, and Surrey. In fact, it would be difficult to name any district where the disease is unknown. Locality would seem, therefore, to exercise but a subsidiary share in its pathogenesis. H. Larrey (quoted by Cohen) affirms that infantry stationed in goitrous districts (so considered) acquired the disease, while other branches of the service did not do so—a fact he considers due to the wearing of knapsacks, and the great constriction of the vessels of the neck by the stock and collar consequent thereon, and to which other arms of the service were not subjected. Cohen remarks that the custom of carrying enormous loads on their backs by the Swiss peasantry favours a like result. Bronchocele is often hereditary—a fact which corresponds with observations recorded with regard to other correlated tracts than that of the thyroid gland, in which the tendency to vaso-motor paresis is transmitted by parents to their offspring.

It will be understood that this insistance upon vaso-motor paresis as the starting-point of the disease is not made with any idea of promulgating a new theory, as there has long been a tendency to its acceptance, though in a vague and general way. The remarks already made on this subject aim rather at defining and localising the centre and source of the vessel dilating impetus, and to show how the former is correlated anatomically with the affected area. The so doing removes attention from the nerves, which are the paths of impressions merely, to a more cognisable and potential region—the ganglia of the cervical sympathetic. Its recognition is fraught with important therapeutic meaning.

The phenomena of exophthalmic goitre point distinctly in the same direction—viz., to vaso-motor paresis; but emanating from a wider range of ganglia than in the preceding forms. Portions of the superior cervical ganglion, innervating the internal carotid artery as well as the middle and inferior ganglia, are now implicated in the paretic condition. As these fresh centres are involved new areas of tissue, supplied by vessels innervated from them, become the scenes in which the effects of the consequent dilatation are manifested. These are most evident where tissue is softest, notably the inter-orbital cushion; also in organs whose functions are readily disturbed by such additions to the normal blood-supply, especially, as might be expected, the cerebral centres. On this explanation the nervousness, headache, and mental deterioration of such patients become intelligible; while the functional disturbance of the heart's action, which is one of the most prominent symptoms in exophthalmic goitre, receives a rational interpretation when it is recognised that the cardiac nerves furnished by each of these ganglia to the heart must share, to a greater or less extent, in the depreciation of their centres. Perhaps the most striking commentary on these vaso-motor relations of the thyroid body and the brain is that which is offered by the phenomena of cretinism, witnessed concurrently with goitre in some mountainous districts. For, looked at from this point of view, the monstrously deformed thyroid does not stand to the accompanying idiocy in the relation of cause and effect. The "large heads, wide vacant features, and goggle-eyes" of the cretin point to perverted nutrition in the region of the head during development as much as the fleshy mass which in these subjects represents the thyroid body does in regard of this tissue tract. Both conditions are the outcome of another physiological factor—viz., an inherent defect in the vaso-motor centres regulating the blood-supply of the two regions, and which defect has acquired the maximum of intensity by long ages of breeding in, added to hygienic surroundings of the worst conceivable description.

It is no part of my present purpose to enlarge on this explanation of the association of goitre with cretinism. Its mention will suffice to emphasise the prolific field for the appropriate explanation of many hitherto quite unintelligible phenomena which the recognition of the fact of the correlation of distant regions by their vaso-motor connexions affords to the physiologist.

Compared with other forms of bronchocele, exophthalmic goitre is a rare disease; before dismissing it, it may be desirable to state that in two cases of the kind which had previously undergone a long course of ordinary treatment, and in which I was induced to give hydrobromic acid, a cure was accomplished in what to me appeared an astonishingly brief period. In a third very complicated case of long standing the patient derived only slight benefit. This number of cases is quite insufficient to generalise upon, and I only venture to record the above facts, because in a disease usually so intractable as this a suggestion of proved utility, although insufficiently supported, may be acceptable in some quarters, and also because this drug was given in accordance with a line of argument analogous to that which led to the adoption of fluoric acid in the treatment of ordinary goitre.

It remains to determine what is the condition of the ganglionic subcentres which expresses itself as loss of contractile power in the vessels whose nervi-vasorum are derived from these ganglia. I have already alluded to heredity as a predisposing cause. The nature of this influence I believe to be that, by its means, a certain ganglion, or set of ganglia, are inherently weak—that is, they develop less nerve force, or part with it more readily, or respond more quickly to reflex impressions, which, if strong, they are slow to recover from, than do other ganglia of the same system. Thus the areas over which these inherently weak ganglia exercise vessel control represent, as regards the system at large, the parts of least resistance. There can, I think, be no doubt about this fact that goitre prevails in a mild form amongst all classes to a largely increased degree over that which has hitherto obtained. The same may be said of other diseases of a vaso-motor origin, presided over by the sympathetic centres of the cervical region, amongst which I may mention diphtheria, and laryngeal and nasal affections generally. I am bound to confess it, though I do so with reluctance, as the result of long study of the physiological effects of tobacco, that smoking is largely responsible for this result. Its effects are constantly manifested in the smoker himself in the form of weakened inhibitory force in the centres primarily influenced by the drug; and, secondarily, the offspring of great smokers exhibit a like impairment of the same centres. Probably the most inordinate smokers are young men prior to marriage. Other influences, the out-

come of our over-wrought civilisation, doubtless co-operate in the same direction.

Thus much may be said as regards predisposing causes. The immediate cause is in most cases reflex in its nature. In studying the phenomena which attest the existence of correlated vaso-motor tracts throughout the economy, the evidence is very strong that such a correlation exists between the genital organs and others situated in the region of the neck. Though not as yet absolutely demonstrated, there is evidence to show that fibres from the cervical ganglia are in direct continuous communication with the ganglia which preside over the circulation of the genito-urinary organs—thus constituting these regions correlated areas. Stags, Professor Haughton states, which have been injured in one testis, do not grow another fighting horn on the side of the injury, but only a soft velvety projection. Defective innervations and congestions of the larynx, so frequently associated with the growth of this organ at puberty and producing the phenomena of "voice breaking," point in this direction. What is called "functional aphonia" in girls of the same age is of a like kind. Lastly, enlargements of the thyroid gland in youths as well as girls commence very frequently at puberty. I am acquainted with at least one case where the disease in a female commenced synchronously with the development of uterine trouble. Case 4 of the following series illustrates the effects of general shock becoming permanent in the part of least resistance. This girl at the age of eleven years experienced two accidents by which she was greatly prostrated, and immediately thereafter noticed the commencement of thyroid enlargement, which continued till the age of sixteen, when she came under my care, and recovered under the fluoric acid treatment.

The second principle which guided me to select fluoric acid for the treatment of bronchocele is to some extent the outcome of the preceding views on the genesis of the disease. Recognising the existence of those correlated vaso-motor tracts to which reference has been made, it proceeds to acknowledge a physiological relationship between drugs belonging to natural groups, whether in the domain of botany or chemistry, and these vaso-motor areas—that is to say, if a member of a natural order of plants shows a tendency to exert vaso-motor influences upon one of these anatomically defined regions, other plants of the same group will be found to exert similar affinities. And so with chemical groups. Time and prolonged observation can alone affirm the general applicability of this view, or show its incorrectness. Allowing it to be only a scientific projection of the imagination, it comes not the less within the range of principles recognised by the scientific method as justifying the initiation of experiments. It was from this standpoint that I made use of it for my present purpose. Finding that experience had already, though empirically, proved that some members of the group of metalloids, including iodine and bromine, exerted a curative influence upon goitrous disease, the inference that other members of the same group might act similarly, or even act more potently, was strictly within the lines of the therapeutic principle just indicated. The fluorine compounds were, so far as I know, untried. An appeal to them seemed legitimate.

To avoid complication, fluoric acid, or hydrofluoric acid as it is also termed, was selected as the nearest attainable approach to the element fluorine. The unmanageable nature of the acid, and its reputed violent action upon organised tissues, presented obstacles to its use. The unstable strength of the commercial acid was a further hindrance. All these difficulties were overcome mainly through the skill of Mr. Bullock, who readily devoted his energies to provide for the requirements of the case. A pure acid of fairly constant strength is obtained by redistilling the commercial acid; it then contains about 30 per cent. of the gaseous acid. By diluting this acid with 200 per cent. of water, a solution is produced capable of being tolerated by the stomach, and also of being preserved and dispensed in glass vessels. Both preparations should be kept in small quantities, as they undergo deterioration by the lapse of time. The strong redistilled acid must be preserved in gutta-percha bottles, which should be closed with a cork, as the gutta-percha plug usually fitted to such vessels admits air, and spoils the efficacy of the drug. Attention to these details, the importance of which I have learned in a four years' experience, will prevent disappointment in its therapeutic use.

In commencing its administration great caution was exercised. I began with fifteen-minim doses of the half per cent. solution in an ounce of water. As it happened, the first patient for whom it was thus prescribed, having been duly cautioned to discontinue the medicine if inconvenienced by it, presented at her next visit symptoms which somewhat alarmed me. She complained of headache and thirst, had a hot dry skin, a glazed tongue, and abdominal pains. She was at once taken into the hospital as an in-patient, when it became clear she was suffering from typhoid fever, and it transpired that other members of her family were similarly affected. This discovery was a relief, for I confess to entertaining the fear that the new remedy was responsible for the patient's condition. The details of this case will be given in the continuation of this article. It is sufficient to say here that she got well of the fever, and after an interval resumed the acid, and ultimately lost her goitre, which was very firm, and had resisted every other treatment continued over many months.

Although I usually commence with a small dose, half a drachm of the half per cent. solution, it is necessary to increase it gradually, which may be carried out to the extent of two drachms, and this appears to be the limit of toleration for the drug. In smaller doses it occasionally produces slight headache and nausea, for which reasons it may require to be temporarily intermitted.

(To be concluded.)

OBSERVATIONS IN URINARY PATHOLOGY AND THERAPEUTICS.

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III. CASES OF DIABETES INSIPIDUS CHARACTERISED BY AN EXCESSIVE ELIMINATION OF PHOSPHORIC ACID (THE SO-CALLED PHOSPHATIC DIABETES).

(Concluded from p. 407.)

CASE 6. *Polyuria; excessive elimination of phosphoric acid and urea.*—J. G——, aged twenty, was admitted into the Seamen's Hospital on Nov. 13th, 1877, suffering from extreme debility and prostration, and complaining of pain in all his limbs, and especially across the loins. His face was somewhat flushed and the eyes bright, but the temperature was normal; the pulse weak and feeble; chest sounds natural, with the exception of some coarse râles in the large bronchial tubes. Urine clear, acid; no albumen; no sugar. He says the present illness commenced three weeks previous to admission, but he had otherwise always enjoyed good health. During this attack he had lost eighteen pounds in weight. He has a spinal curvature, the seventh and eighth dorsal vertebræ being the bones affected, and he has also a strumous appearance generally.—On Nov. 19th, seven days after admission, the mucous râles in the chest had cleared up, and he was not so prostrate. The pulse was stronger, and the temperature had remained normal during the time he had been in the hospital. Still the patient, in the absence of any definite symptoms, was extremely feeble and weak. Although no sugar had been found in the urine, it was thought advisable to collect the urine for twenty-four hours, and then test for that substance in the whole quantity.—Nov. 20th: The urine collected during the last twenty-four hours measured 4600 cc., and had a specific gravity of 1010, but gave no reaction with Fehling's solution.—Nov. 21st: The quantity of urine collected in twenty-four hours measured 1400 cc., a nearly normal quantity, but the specific gravity had risen to 1029, so that the relationship between the solids excreted on each day was tolerably constant, and exceeded by a third the normal excretion. The urine was collected, measured, and the specific gravity taken subsequently each day during the patient's stay in the hospital; but it will be sufficient here to state that the average quantity passed by the patient each day for a month was 3263 cc., with a specific gravity of 1017. Taking the healthy excretion of an adult to be at the outside 1500 cc., with a specific gravity of 1020, the patient was passing more than twice the normal quantity of urine, and excreting one-third more than the ordinary quantity of urinary solids.

The urea and phosphoric acid were determined quanti-

tatively on several occasions by the house-physician, Dr. Murphy, with the following result:—

Date	Quantity of Urine. Cc.	Sp. gr.	Urea. Grms.	Phosp. Acid. Grms.
Dec. 3rd ...	4476 ...	1011 ...	67 ...	5·3
,, 4th ...	4800 ...	1016 ...	116 ...	9·6
,, 5th ...	4100 ...	1018 ...	103 ...	9·0
,, 7th ...	3050 ...	1017 ...	61 ...	4·28

On the 13th of December I made a quantitative estimation of the urea and the earthy and alkaline phosphates, with standard solutions distinct from those used by Dr. Murphy, and my results closely corresponded with his—viz., quantity 2700 cc., total urinary solids 108 grms., urea 89 grms. Phosphoric acid in combination with lime and magnesia 1·8 grms.; phosphoric acid in combination with the alkaline oxides 3·7 grms.; total phosphoric acid 5·5 grms. Diet: 4 oz. wine, milk 2 pints, strong beef-tea 1 pint, bread 12 oz. The patient remained in hospital till the 20th December, when he was removed by his friends. His condition was materially improved, and he had regained 15 lb. of his lost weight, but the urinary secretion was not diminished. During his stay in hospital the patient suffered greatly from boils. The patient had no dimness of sight, nor any appearance of cataract. At no time could even minute traces of sugar be discovered in the urine. This may be considered as a typical case of diabetes insipidus, accompanied with increased metamorphosis of tissue. It resembles Willis and Prout's cases of azoturia, and also corresponds to Tessier's fourth group.

The particulars of the six foregoing cases may thus be briefly summarised:—

—	Age.	Approximate weight.	Quantity.	Sp. gr.	Phosp. Acid.	Urea.
Case 1	16	8 st. 7 lb.	2900 cc.	1010	5·2 grms.	51·0 grms.
,, 2	24	9 st.	9500 ,,	1004	6·0 ,,	—
,, 3	25	9 st.	2300 ,,	1015	5·8 ,,	33·5 grms.
,, 4	27	8 st. 7 lb.	1520 ,,	1022	5·2 ,,	41·2 ,,
,, 5	37	12 st. 7 lb.	2020 ,,	1018	7·6 ,,	—
,, 6[1]	20	9 st.	3825 ,,	1016	6·7 ,,	87·2 grms.

In all the increase of phosphoric acid over the normal excretion was considerable. If we except Case 2, they differ from the ordinary hydruric forms of diabetes insipidus, in that the discharge of urine, though considerably more than normal, in no way approached the enormous superflux met with in that form of the disease.[2] On the other hand, the cases in many respects resemble those related by Prout and Willis, and to which those authors gave the title azoturia. As, however, these observers did not estimate the phosphoric acid excreted as well as the urea, it is impossible to say in their cases whether it was increased or not. Dr. Parkes,[3] however, quotes a case of Vogel's, which seems closely to correspond with the instances I have given, and in which the following amounts were passed in two periods of twenty-four hours respectively: Quantity 2800 cc. and 3600 cc.; urea 40·6 grms. and 47 grms.; phosphoric acid 4·1 grms. and 8·3 grms. In this case the urea as well as the phosphoric acid was increased, though the proportionate increase of the latter over the former in the second analysis is prodigious. This is what Dr. Tessier contends for when he gives the distinctive title "phosphatic diabetes" to this form of diuresis accompanied with increased elimination of phosphoric acid; for though urea in some of his cases was in excess, it was not so in all; and this, he says, is the point that distinguishes between azoturia and phosphaturia. Of my cases, in Case 1 and Case 4 the urea was about one-third in excess, whilst the phosphoric acid was more than double the normal excretion. In Case 6 the urea was more than double, and the phosphoric acid treble the normal. In Case 3 the amount of urea was normal, whilst more than double the usual amount of phosphoric acid was excreted.[4] In these cases, therefore, the excess in the elimination of phosphoric acid was proportionately larger than that of the urea.

The question may now be asked, Whether increase of phosphoric acid is not a constant phenomenon in all cases of diuresis, and whether it may not be accounted for by the increased ingestion of food and by the washing out of the tissues by the drain of water through them? Analytical evidence on this point is meagre, but what evidence we have shows that the increase in the quantity of food ingested, or the drain of water through the system, does not necessarily increase the elimination of phosphoric acid. Dickinson[5] and other observers[6] have remarked an increased elimination of phosphoric acid, especially in combination with the earths, in certain cases of diabetes mellitus, but this increase is very far from being universal, as other analyses prove (Parkes).[7] Again, in the cases of diabetes insipidus given by Dickinson, though an increase is noted in some, it is not in all; and in two cases, which I reported in THE LANCET,[8] the phosphoric acid was if anything decreased. For example, in one case in a man weighing 11½ st., the daily average secretion of urine was over 3000 cc., whilst the phosphoric acid estimated on three occasions never exceeded 2·4 grammes. In the second case the patient weighed 8½ st., the urine passed was 2400 cc., and the phosphoric acid was only 1·6 grammes. But if the exaggerated excretion of phosphoric acid is not a constant phenomenon of diabetes insipidus, to what are we to attribute its appearance in the exceptional cases? And here we pass from the consideration of facts to the region of conjecture. There is no question in scientific medicine on which we have fewer facts to generalise from than that concerning the elimination of "phosphates in disease," and consequently there are few subjects which have yielded a richer harvest to the quack. Physiology[9] can only tell us that the element phosphorus is absolutely essential for the growth and nutrition of the tissues, but cannot explain its *rôle*. Whilst, therefore, our information with regard to the physiological action of phosphorus within the body is still so scanty, it is obvious we are not yet in a position to indulge in speculations concerning the part played by it in the production of certain pathological phenomena with which it has been associated. It is satisfactory, however, to know that the attention of scientific workers[10] has been called to this subject, and we may hope that shortly a sufficient number of trustworthy facts may be collected which will enable us to gain a clearer insight into the part played by this important element with respect to the nutritive changes with which it is concerned within the body. Nor is clinical observation in this instance much in advance of our physiological and pathological knowledge. Excessive elimination of phosphoric acid has been noticed in acute inflammation of the membranes of the brain (Bence Jones). In the acute paroxysms of certain forms of mania (Sutherland and Beale), and after injuries to the head (George Harley). But whether in these conditions it is due to increased metamorphosis of the nervous matter or to the irritation of a still hypothetical "coördinating chemical centre," or to the influence of a disturbed condition of the nervous system upon nutrition generally, it is at present impossible to decide. Increased elimination of phosphoric acid, again, Beneke[11] has considered in some cases to be due to excessive formation of acid in the tissues, dissolving out the earthy phosphates; in these cases oxalates and phosphates of lime will both be found in excess in the urine. Similarly in certain cases of dyspepsia associated with excessive formation of lactic acid in the stomach and intestines, more phosphate of lime may be rendered soluble and absorbed into the system, and thus pass out by the urine instead of by the bowel. Marcet[12] has shown from analyses of pulmonary tissue in consumption that a considerable reduction of phosphoric acid and potash takes

[1] Average of five observations.

[2] It may be as well to mention that, though reference is only made to the quantity of urine and the specific gravity on those days when an estimation of phosphoric acid was made, yet observations on this point were frequently made in each individual case, and the relationship was found to be pretty constant.

[3] Op. cit., pp. 10, 367.

[4] Throughout I have assumed the 2·5 grammes represent the normal excretion of an adult weighing from 8 to 9 stone, and 3· grammes for an adult weighing 11 to 12 stone.

[5] W. Howship Dickinson, M.D., Diseases of the Kidney, &c.; Part 1, Diabetes, pp. 173 and 208. London, 1875.

[6] Neubauer, Boecker, Beneke, Vogel, Gaethgens, quoted in Ziemssen's Cyclopædia; article, Diabetes.

[7] Op. cit., p. 344.

[8] THE LANCET, Feb. 26th, 1876.

[9] Text-book of Physiology: Michael Foster, M.D., F.R.S., p. 366. London, 1878.

[10] W. Zalzer: Ueber das Verhältniss der Phosphorsäure zum Stickstoff in Urin, Centralblatt fur die Med. Wissenschaft, 1876, p. 474. Von Prof. Dr. Edlessen in Kiel: Ueber das Verhältniss der Phosphorsäure zum Stickstoff in Urin, Centralblatt f. d. Med. Wissenschaft, 29 Juli, 1878. Emilie Lehmus: Ueber der Relativen Wert der Phosphorsäure in Urin bei Kindern. Cbl. f. Kinderheilk., No. 19, 1878.

[11] Dr. F. W. Beneke: Archiv des Vereins, p. 450. 1854.

[12] W. Marcet, M.D., F.R.S. Experimental Inquiry into the Nutrition of Animal Tissues, p. 47. London, 1874.

place both in the insoluble tissue and nutritive material, as compared with healthy lung tissue. And Edlessen[13] has shown that the excretion of phosphoric acid is increased in cases of anæmia, especially pernicious anæmia. The observations of the authors I have quoted are, however, too limited to draw definite conclusions from as yet. All that we are warranted in assuming from them is, that increased excretion of phosphoric acid is met with in those states of the system which we characterise as "nervous," and that it is often met with accompanying or preceding diseases in which disorder of nutrition is usually well marked.[14]

With regard to the treatment of the form of disease under consideration, the main indications are rest and an endeavour to promote nutrition generally. To attain this end opium or codeia should be given in full doses, when the patient first comes under observation. As soon, however, as the nervous system is quieted, and the rheumatic and neuralgic pains are less severe, it should be discontinued, lest it interfere with digestion. General tonics, such as iron, quinine, nux vomica, hydrochloric acid, and cod-liver oil should be persevered with. When there is a history of syphilis iodide of potassium should be combined with these remedies. Warm baths, followed by tepid douches, give great relief to the neuralgic pains, and also soothe the nervous system. The soluble phosphates may be administered; but their utility in these cases is questionable. There appears to be no lack of these constituents in the system; the difficulty seems rather to lie in the want of power of the tissues to retain them. The food should be light and nutritious, and milk one of the chief constituents. Alcohol should be avoided; it invariably, even in small quantities, increases the diuresis. The same may be said of coffee. Change to dry, bracing air should be obtained, if possible. The clothing should be warm, and the patient carefully guarded against cold, since in these cases a reduction of bodily temperature is always noted. When, in spite of the pursuance of these therapeutic and hygienic conditions, the diuresis and excretion of phosphoric acid continues, though the general condition of the patient may temporarily improve, there is reason to fear that phthisis will supervene, or that the disease may assume the features of saccharine diabetes.

ELEVEN CASES OF STONE IN THE BLADDER

TREATED BY LITHOTRITY AND RAPID EVACUATION OF THE FRAGMENTS (BIGELOW'S METHOD).

BY WALTER J. COULSON, F.R.C.S. ENG.

CASE 1. — Mr. M——, aged sixty-nine, seen in consultation with Mr. Spencer Watson. Symptoms of bladder irritation began to show themselves during the winter of 1879–80, and became more severe early in May. Retention of urine was a prominent symptom on one occasion, a catheter being required; and hæmaturia was once observed after a rather severe jolting in an omnibus. A calculus was detected on sounding, and on June 22nd Bigelow's operation was performed in presence of Mr. Watson, Mr. Heycock, and Mr. Eastes (who administered ether). The calculus was found to be very loose in texture, and was easily broken up and removed in about ten minutes by means of a fenestrated lithotrite and No. 16 tube. The fragments, composed of oxalate of lime, weighed twenty-nine grains. All symptoms of calculus disappeared in less than twenty-four hours. The urine, however, for some weeks after the operation contained a deposit of pus and amorphous phosphates. This symptom was relieved by warm injections (first plain and afterwards acidulated) into the bladder; the pus disappeared and the phosphates diminished. Four months afterwards the patient was reported to be in excellent health, quite free from pain or discomfort, and able to take repeated railway journeys without ill effects.

CASE 2.—Charles C——, aged sixty, had suffered from symptoms of stone for about twelve years, and had passed small fragments occasionally. The symptoms were much aggravated during the last two years, hæmaturia and severe paroxysms of pain being especially frequent; urine pale, with a thick yellow deposit; alkaline; sp. gr. 1010, slightly albuminous.—Aug. 20th: The patient being under ether, Bigelow's operation was performed, a fenestrated and plain lithotrite being used in succession. Sixty grains of débris were removed in fourteen minutes, through a No. 16 curved tube. Two hours afterwards the patient had a sharp rigor which, however, soon passed off. All the symptoms referable to the calculus speedily subsided, and eight days after the operation the patient was able to walk about in comfort. A fortnight afterwards he reported himself as free from all symptoms of calculus, and much improved in health.

CASE 3.—This case cannot fairly be classified among those treated by Bigelow's method, inasmuch as the completion of the operation was impossible, owing to the cause specified in the notes. The case, however, is a good example of a very important obstacle sometimes met with in lithotrity, and it is therefore inserted in the present series. H. B——, aged sixty-six, had suffered from symptoms of calculus for five or six years, and had passed gravel from time to time. Urine normal in appearance and reaction; no albumen; sp. gr. 1020.—Sept. 3rd: The patient being under ether, I passed a fenestrated lithotrite, and crushed with much difficulty a very hard stone, measuring about an inch and a half in diameter. The fragments were crushed five times, but owing to the rigidity and contracted state of the bladder, it was impossible to continue the manipulations. A small quantity of detritus was removed through a No. 16 tube. In the evening patient had a slight rigor lasting a few minutes; temperature 102°. On the following day patient had somewhat recovered; he had passed several large fragments during the night. Bladder very irritable; urine passed every half-hour. On the 7th patient had another rigor, and the temperature rose to 104°. Urine ammoniacal, and sometimes passed unconsciously. During the next few days there was a little improvement in the local symptoms, but the patient became drowsy at intervals, and diarrhœa set in. On the 17th the temperature was normal, but the drowsiness continued. On the following day the patient was unconscious at intervals, and very little urine was passed. A vapour bath was constructed in the patient's bed, and poultices were constantly applied over the kidneys. Copious perspiration was produced, but the symptoms of uræmia became more and more marked, and the patient died at 10 P.M. on the 19th, sixteen days after the operation. Leave to examine the body could not be obtained.

CASE 4.—C. E——, aged sixty-nine, had suffered from symptoms of calculus for about six months, frequency of micturition and pain after the act being chiefly complained of. Hæmaturia not observed. Urine clear, sp. gr. 1022; acid reaction; slightly albuminous; hyaline casts.—Sept. 3rd: The patient being under ether, a small but very hard stone was crushed with a fenestrated lithotrite. A No. 16 curved tube, a plain lithotrite, and the same tube were introduced in succession, the operation being completed in fifteen minutes, and débris weighing fifty grains being removed. On the following day the condition of the patient was quite satisfactory.—Sept. 5th: A rigor occurred, and the temperature rose to 104°. During the next three days the condition varied; there was some improvement on the 8th, but marked drowsiness was noted on the 9th. This symptom increased, and but little urine was passed. The patient became unconscious during the afternoon of the 10th, and he died at 10 P.M.

Post-mortem examination.—Bladder hypertrophied, but quite free from calculus. The ureters much dilated. The kidneys of normal size, but exhibiting on section numerous disseminated abscesses.

CASE 5.—Mr. M——, aged seventy-four, seen in consultation with Mr. Maurice of Reading. Had suffered from symptoms of bladder irritation for about ten years, and from more decided symptoms of calculus for about four years. On Sept. 4th, the patient being under ether, Bigelow's operation was performed, a fenestrated and plain lithotrite, and No. 16 tube, being used in succession. Eighty grains

[13] Op. cit.

[14] It will be observed that I have not included rickets among the diseases in which an increased elimination of phosphoric acid is noticed. The truth is that the fact of there being an increase is by no means established. Professor Gamgee, in his recent work on Physiological Chemistry, states that no reliable analysis has yet been made to prove it. Whilst Dr. Seeman, who has analysed the urine of sixteen rachitic children, has actually found a diminution, which was most marked when the disease was at its height. Dr. Seeman regards the bone changes in rickets to be due to lime starvation, the salts of that base not being introduced in sufficient quantity into the system, owing to the catarrhal condition of the mucous membrane of the intestines hindering their absorption. ("Zur Pathogenese und Ätiologie der Rachitis," von Dr. Seeman, Virchow's *Archiv.*, lxxvii., 1879.)

of débris, composed of oxalate of lime, were removed in thirty minutes. The patient was at once freed from all symptoms of calculus, and his recovery was uninterrupted by any complication. Three months afterwards the patient reported himself as being perfectly free from all trace of his previous symptoms. Mr. Maurice, Mr. Heycock, and Mr. Royds (who administered ether), were present during the operation.

CASE 6.—Mr. B——, aged fifty-five, seen in consultation with Mr. Maurice of Reading. During the last five years he had frequently passed reddish sand and small particles of gravel, and suffered from bladder irritation. More marked symptoms of calculus showed themselves about five months ago; severe pain in the perineum, aggravated by walking and carriage exercise, being especially complained of.—Oct. 19th: Ether having been administered by Mr. Royds, the stone was crushed with a fenestrated lithotrite, and fragments weighing 116½ grains were removed through a No. 16 tube, the operation being completed in twenty minutes. The relief afforded was immediate and perfect. No bad symptom of any kind appeared, and the patient was quite well, and able to leave his house and walk about with comfort five days after the operation. Messrs. Maurice and Royds of Reading, and Mr. Heycock, were present.

CASE 7.—J. H——, aged fifty-four, had suffered from calculus for some years, and lithotrity had been performed several times. The symptoms had recurred during the last few months. Urine alkaline; sp. gr. 1008; no albumen.—Oct. 22nd: The patient being under ether, the stone was crushed with a fenestrated lithotrite. A No. 16 tube was then introduced, and the operation, which lasted ten minutes, was completed by means of a plain lithotrite and the same tube. Fragments weighing sixty grains were removed. The patient made a rapid recovery, and on the sixth day after the operation he expressed himself as feeling quite well, and free from all his former symptoms.

CASE 8.—Particular interest is attached to this case from the fact that an accident, of a kind hitherto unrecorded, happened to the lithotrite. The instrument in question (one of English manufacture, after Dr. Bigelow's model) was shown at a meeting of the Medical Society (THE LANCET, Nov. 27th, 1880). Mr. F——, aged sixty-eight, a medical man from Northamptonshire, had suffered from symptoms of calculus for about six years.—Nov. 11th: The patient being under ether, and the meatus urethræ having been incised, a large stone, measuring about two inches in diameter, was caught and crushed with a Bigelow's lithotrite. The stone offered much resistance to the instrument, and broke with a loud crack. Three or four fragments had been crushed in succession, when an accident happened to the lithotrite, and it was found that the screw-power no longer acted on the male blade. On examination it appeared that a small screw and two pins, by which the handle of the lithotrite is fastened to the shaft, had given way, so that these two portions of the instrument became separated. It was found impossible to keep them together while the screw-power was applied, and no substitute for the broken screw and pins could be extemporised. By percussion, however, upon the handle, the blades were freed as much as possible from débris, and the instrument was removed. In doing this some amount of injury was inflicted upon the neck of the bladder and urethra, as fragments protruded from between the blades. It was absolutely necessary that the operation should be completed, and this was done by means of a fenestrated instrument, the fragments (composed of lithic acid and weighing when dry 500 grains) being withdrawn through a No. 16 tube. The operation occupied two hours and five minutes, including twenty minutes delay caused by the accident. The patient's son (also a medical man), Mr. Teevan, Mr. Heycock, and Mr. Bailey (who administered ether) were present. No bad symptom followed this prolonged and formidable operation. The urine contained blood for a few hours only, and on the following day there was a slight rigor with vomiting. These symptoms, however, passed off and did not recur. On the eleventh day after the operation the patient was able to retain his urine for three hours at a time, and all symptoms of bladder irritation had disappeared.

CASE 9.—Mr. B——, aged seventy-seven, had suffered from symptoms of irritation of the bladder for rather more than two years, and had noticed blood in his urine during the last year. These two symptoms are now frequent, especially after exercise. He passed a small concretion about a fortnight ago. On Nov. 23rd, ether having been administered by Mr. Knott, and the meatus urethræ incised, the stone was crushed with a fenestrated lithotrite. A No. 16 tube was then introduced, and débris weighing 198 grains, and consisting of fragments and small calculi, was removed. The time occupied was thirty-five minutes. No bad symptoms followed the operation. On the 24th and 25th the patient's condition was quite satisfactory. On the 26th he became feverish, and complained of pain along the urethra, and the urine was high-coloured and offensive. The introduction of a catheter and the removal of four ounces of residual urine gave great relief. The feverish symptoms subsided, and on the 28th the patient was able to leave his bed for about three hours. By the following day all symptoms of irritation of the bladder had entirely subsided.

CASE 10.—A. P——, aged thirty-two, stated that he had seen blood in his urine from time to time during the last two years, but that pain in the bladder and penis (especially after micturition) had troubled him for twelve months only. Micturition now very frequent, the flow of urine sometimes stopping suddenly. Urine: specific gravity 1015; alkaline reaction; slightly albuminous; hyaline casts.—Nov. 24th: The patient being under the influence of ether, and the meatus urethræ having been incised, a fenestrated lithotrite was introduced and attempts made to crush the stone, which was found to measure three inches and a quarter in diameter. The calculus, however, resisted all the force that could be applied to it, and Bigelow's lithotrite was then substituted. After several attempts the stone gave way, and some large fragments were then caught and crushed. The débris was removed through a curved tube. The stone was again seized with a strong fenestrated instrument, which, however, gave way when the screw-power was forcibly applied, the handle separating from the shaft. This being withdrawn, several instruments were used in succession, and after repeated crushings and removals of débris the operation was completed; it occupied three hours and a quarter. The weight of the débris removed was 1890 grs. At 9 P.M. the patient's condition was satisfactory; no sickness or rigor, and but little pain. On the following day there was some amount of febrile reaction, but this gradually passed off. On the 27th the temperature was 99·4° and the pulse 96. No rigor had occurred, and there was no pain over the bladder. On the 30th the patient complained of pain at the end of the penis, and on the following day the bladder was examined with a lithotrite, but no fragment could be detected. On Dec. 2nd the patient reported himself as feeling comfortable, and able to retain his urine for two hours.

CASE 11.—J. W——, aged fifty-six, had suffered from symptoms of irritation of the bladder for several years, and frequently noticed hæmaturia. The symptoms had been more marked during the last twelve months. Urine: sp. gr. 1016; alkaline; no albumen. The patient on coming under observation (Nov. 22nd) complained of thirst and feverishness. Evening temperature 103·4°.—Nov. 24th: Ether having been administered, and the meatus urethræ incised, a calculus about an inch in diameter was crushed with a fenestrated lithotrite. A No. 16 curved tube was then introduced, and the fragments removed. The operation was completed by means of a plain lithotrite and the same tube. It occupied twenty minutes, and débris weighing 150 grains was removed. In the evening after the operation the temperature was 98·4°; the patient complained of a little pain over the bladder. This, however, subsided on the following day, when the condition was in all respects satisfactory. On the 28th the patient was allowed to leave his bed, and on the 30th to take a short walk. On Dec. 3rd, nine days after the operation, the patient reported himself as quite well, free from all symptoms of calculus, and able to retain his urine for several hours.

Remarks.—There are several points of interest connected with these cases. The calculus in the first case was of a somewhat rare kind, for owing to the absence of any binding material the particles of oxalate of lime were very loosely attached to each other. Mr. Poland has reported the removal by lithotomy of a similar calculus ("Holmes's System of Surgery," vol. iv. p. 1024). With regard to Case 3, it is not to be taken as an example of Bigelow's method, for the success of which the removal of the calculus at one operation is a necessary condition. In this case, owing to the state of the bladder, that condition could not be fulfilled. Symptoms due to suppression of urine rapidly supervened,

and although the patient survived more than a fortnight, his state was such that no further operations were deemed expedient. The fourth patient was known to be suffering from chronic nephritis, but as the stone was small, and the operation speedily completed, there was every reason to hope that the renal complication would not become seriously aggravated. For forty-eight hours all went on well, but symptoms of uræmia supervened, and the condition soon became hopeless. The nine successful cases illustrate in various ways the advantages of Dr. Bigelow's method, the relief afforded in the majority of these instances being rapid and complete. Cases 1, 2, 5, 6, 7, 9, and 11 are particularly noticeable in this latter respect. In Cases 8 and 10 the accidents which occurred to the lithotrites complicated the proceedings and caused some delay in completing the operations. In the latter of these cases the stone was a very large one (4 oz. 140 grs.), indeed it would appear to be the largest hitherto removed by lithotrity. In a case mentioned in Dr. Bigelow's work the fragments weighed 4 oz. 52 grains, and the removal required three sittings occupying eight hours and a quarter. In the present case, in spite of the delays caused by the giving way of the instrument, the operation was completed in three hours and a quarter. The successful result in both of these cases justifies the belief that calculi four ounces in weight may be dealt with by Bigelow's operation provided that the condition of the bladder is favourable to lithotrity, and that instruments can be constructed capable of bearing the enormous strain involved in crushing. On examining Bigelow's lithotrite one is struck by the enormous power of the blades as contrasted with the imperfect manner in which the handle is connected with the shaft and the consequent inadequate resistance to the force applied by the screw. This imperfection, however, can doubtless be remedied. Care has been taken to point it out to the makers of the instrument. The remaining mechanical portions of Bigelow's instrument leave little to be desired. The ball by which the screw-power is applied, and the revolving cylinder-handle for opening and closing the lock, are decided improvements upon the wheel and button of former instruments when large stones have to be dealt with, while the power of the blades has been sufficiently tested in the cases just referred to. With regard to the time occupied in the operation, Dr. Keyes states that he removed from nineteen patients 4241 grains of stone in 938 minutes, or on an average 4½ grains of stone for each minute of work. The total weight of débris removed in the ten cases of this series was 3133 grains, the time occupied in the operations being 454 minutes. This gives an average of nearly seven grains per minute of work. With instruments improved as suggested it is probable that this average might be much increased.

Harley-street, W.

AN OUTBREAK OF TRICHINOSIS (?) FROM EATING THE FLESH OF A WILD BOAR.

BY JOHN WORTABET, M.D.,
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THE village of Khiam, where this disease has recently broken out, lies not far from the principal sources of the Jordan, which, losing themselves in the plains of El-Huleh, form a large marsh. From the thick jungles of papyrus which occupy that marsh a large wild boar was shot and brought to Khiam on the 25th of November. This was a great treat to the poor villagers, who can rarely afford to indulge in butcher's-meat, and many of them ate the flesh, partly raw and partly half-cooked. The meat was observed at that time to be perfectly fresh and good, and no one noticed that it was in any way diseased; but during the course of the second week all the persons who had eaten became ill, and if any escaped at that date they suffered a short time later. Of those who had abstained not one fell ill. The nature and symptoms of the disease were the same in all the victims; but those who ate the flesh raw suffered most severely, and the children generally suffered less than adults. The head of the boar was sent as a present to a family in Hasbeya, some miles north of Khiam, who boiled it very thoroughly before eating it, and though a good number joined in the repast no one of them suffered in the least.

These facts I verified by visiting the place of the disaster, which is a two days' journey from Beyrout, and where I spent Jan. 1st and 2nd in studying on the spot all the circumstances of the case. I found 257 persons more or less ill—viz., men, 121; women, 101; children, 35. Five others—three men and two women—had died before my arrival. I carefully examined the symptoms and the course of the disease in a large number of those cases, about which there was a remarkable and almost wearisome identity. The main points were as follows:—From ten to twenty days after eating of the meat the face and extremities became œdematous, the swelling extending over the whole body. This was accompanied by severe pain in all the muscles, with more or less fever. These phenomena did not generally continue more than two or three weeks, and were followed by a slow convalescence with much weakness and lingering muscular pains, and occasionally by slight relapses. I shall now proceed to state the matter in a somewhat more detailed manner.

As I entered the village I was at once surrounded by some twenty men, women, and children, all of whom had been among the victims. Their faces were still puffy and pale, and they looked very weak, but convalescent. They all had one story to tell: "We ate of the flesh, but did not feel unwell till some days after, when we had much pain all over the body, swelling, and fever. We are now much better, but very weak, and not free from pain yet." In examining carefully a few of the cases I found nothing more than they had stated. The tongue was clean, the appetite good, and the functions of the alimentary canal normal. In almost every case, however, there was a peculiar appearance of the floor of the mouth, the inferior surface of the tongue, and the gums. Situated on the mucous membrane there were small white conical projections, a few of which I clipped and subsequently examined with the microscope, but with negative results as to the existence of any parasite within them. The gum often presented the appearance of congested patches, while at its border, where it dips into the alveoli, it was sometimes red, and bled easily on pressure.

The period of incubation does not seem to have ever been under ten days, though it was prolonged in some cases to twenty. In one individual, who had eaten the meat fairly cooked, the disease did not appear before the end of the fourth week, and then it was so slight that he was not laid up by it. I asked particularly whether they, or any of them, felt unwell during that time, and they were all unanimous in saying that up to the date of the actual invasion of the disease they felt as well as usual. I heard, however, of one man who had vomiting and diarrhœa soon after eating, probably the effect of an overloaded stomach, and that he was one of those who had suffered the least. The instances in which the disease appeared later than the second week were very few.

The order of the symptoms, after the disease was fully declared, appears to have been, as far as I could find out, a swelling of the face and extremities, accompanied or soon followed by severe pain in all the muscles of the body, and more or less fever, with headache, thirst, perspiration, and much itching of the skin. These symptoms continued about two weeks, and it was during this period that five persons died, apparently from the effects of the fever. The majority of the sick became then slowly convalescent and left their beds. Having learned this much from these people I next visited the sick who were still confined to their beds. This number could not have been far from 100, but most of them were evidently beginning to recover, and with the exception of an œdematous state of the face and extremities, and lingering pains in the muscles, with, perhaps, a slight febrile reaction towards the evening, there was nothing particular to observe. The severer cases, which were not more than five or six, presented still the typical features of the disease. The fever was of an asthenic form, in one case with a dry typhoid-looking tongue, and appeared to be of a secondary character in the chain of morbid phenomena, and probably produced by a general irritation of the whole system. The pain, which seemed to invade all the voluntary muscles, was very severe, but appeared most in the muscles of the extremities and at the different points of their attachments to the bones. Both flexion and extension were very painful, and the patient lay generally on his back, with his limbs in a state of semi-flexion. In one instance I found the calf of the leg hard and very tender on pressure. Every

movement gave pain, and the muscles of mastication, swallowing, and breathing seemed to be all equally implicated. The voice was somewhat husky, and there was pain in the region of the larynx. At one time during the march of the disease they complained of a swelling in the tongue, and some had suffered from conjunctivitis, of which I saw two instances. The bowels seemed to have been regular throughout, and I was struck by the normal state of the alimentary canal and digestive functions where there was so much suffering and constitutional disturbance. Some of those who were still sick in bed had been better, but had relapses, which they attributed to imprudence on leaving their room too soon.

I asked the older men of the village whether they had ever observed such a disease among them from eating the flesh of wild boars, which are frequently hunted during winter from the neighbouring jungles. They said they never had anything of the kind, but that some ten years ago there was a similar outbreak from the same cause in the village of Kiniat, a few miles to the east, and when about twenty persons lost their lives. I had a confirmation of this from other quarters, and I have no doubt that it was true. I was told, also, that the wild boar lives chiefly on the roots of the canes which are so abundant in the marshes, and as he burrows the ground with his snout he snaps up small animals, such as worms, snakes, and wild rats—the latter of which are said, I believe, to be sometimes infested with the trichina spiralis.

Was this outbreak, then, in Khiam one of trichinosis? I am sorry to say that the one incontestable proof—the microscopic demonstration of the parasite—is up to this date still wanting. No case of death took place while I was there, and to open a grave would have been perhaps impossible. All traces of the boar had disappeared. One brave man offered his arm for examination, but I did not like to inflict pain and injury on the poor fellow who was still suffering severely from the disease. I heard of a cat which had eaten of the meat and died, but it could not be found. I heard of another in regard to which the statements were very contradictory as to whether it had eaten or not. It appeared well and quite lively. On killing it, however, and examining different pieces of muscle with the microscope, I found them quite healthy and free from the parasite.

I still hope to obtain a piece of muscle for examination from one of the bodies of those who died from the disease, and to communicate the result. In the meantime it is quite rational to believe, judging from the history of the outbreak, and from the symptoms of the disease, that we had here probably another instance of a trichinatous infection on a larger scale than has hitherto been recorded. If it were not that, what else could it have been?

Subsequently I received a letter from the pastor of the Protestant community in that village, in which he says: "No more deaths after you left us. The patients are gradually improving, and those who are still in bed are few; but some are still swollen, and complain of pain in the hands and feet. They are all very weak and incapable of work, while a few have intermittent fevers, for which they are taking quinine."

P.S.—Since writing the above one of the victims mentioned—a somewhat aged woman—whom I had seen quite ill when I was there, has died, and I have succeeded in obtaining from the body a piece of muscle (biceps brachialis), which reveals under the microscope a good number of trichinæ, and sets at rest any question as to the nature of the disease. The parasite lies coiled across the primitive fibres, and apparently within the sarcolemma of the fasciculi, and appears to be free—not enclosed in a cyst. The stage of calcification of the capsule may not have been reached, of the sac may have been too transparent to allow of detection. The trichinæ may be obtained free of the muscular tissue by a moderate pressure of the covering glass, but they are apt to get thus uncoiled, and to lose their characteristic spiral form. I have had a few specimens mounted, and will try to send a piece of the muscle itself by this mail. To the naked eye the tissue has a perfectly healthy appearance. I have also received another letter from the village, which states that they were having a good number of relapses, and mentions particularly a return of the swelling, of muscular pain, chiefly at the bend of the elbows and knees, and of much itching over the whole body. The patients complain of a sense of sudden failing if they cannot get at food as soon as there is a craving for it. Many are still in bed, and those who are able to be out feel very weak, and continue to feel pain. I fear there will be some more fatal cases.

Beyrout.

[NOTE.—We received from Dr. Wortabet a specimen of muscle referred to in the postscript, and on submitting it to microscopical examination, we found it to contain a large number of non-encysted embryo nematoids. An examination of the isolated worms showed them to possess the general shape, with terminal anus, met with in the embryos of trichinæ spiralis. They were too immature to admit of any details of organisation being made out. They were found to be $\frac{1}{12}$" long by $\frac{1}{1\,0\,0}$" broad. For the most part they were situated in the midst of small connective tissue overgrowths between the muscular fibres, and the fact that they were non-encysted is in accordance with the other fact that they had not yet attained the usual size of encysted trichinæ.—ED. L.]

ON THE

ANTIPYRETIC TREATMENT OF TYPHOID FEVER BY MEANS OF SODIUM SALICYLATE.

BY HENRY TOMKINS, M.D.,

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(Concluded from page 410.)

OF the total number of patients treated, 14 (6 male and 8 female) proved fatal, and at first sight this may not appear to present a very favourable case for the employment of the salicylate. Forty-six cases show a mortality of 14, or something like 30 per cent., but the fallacy of mere figures is proverbial, and before hastily coming to an adverse conclusion several qualifying conditions are to be taken into account. Firstly, the whole of these are selected cases—selected on account of their marked severity,—those cases in which the ordinary resources of medicine and therapeutics offered at best but a faint hope of success; they were, in fact, chiefly that 15 or 20 per cent. which up to the present all our efforts have been unavailing to save. Again, in addition to the well known fact that the cases brought for treatment to hospital are, as a rule, more severe than those treated elsewhere, there is this to be borne in mind, that during the time over which these extend the patients admitted here include a large proportion of pauper cases, the mortality among whom is always higher than in those of a better social status, as is well shown by the statistics of the London Fever Hospital, where, after the exclusion of pauper cases, the death-rate at once was considerably lowered. But further, on examining these 46 cases, it is found that 5 of them were almost hopeless on admission, and in 4 death was the result of intestinal hæmorrhage and lung complication.

A point deserving of some attention is that in a large proportion of the fatal cases the temperature resisted the antipyretic action of the soda, even when pushed to extreme doses; and from my experience I would submit that whenever the poison appears to have got so firm a hold of the system that the salicylate in full doses, after twelve hours administration, has failed sensibly to reduce the temperature, the prognosis is most unfavourable, and its further use is not to be persisted in.

Would space permit, more complete details of the above would furnish abundant proof of the power the salicylate has in rapidly reducing the pyrexia, and influencing beneficially the course of the disease, but one case only must here suffice.

Sarah H——, a fairly well-nourished child, aged seven, admitted April 9th, 1879, with indistinct history of vomiting, headache, and purging; ailing about a week. Complains now only of headache and feeling tired. Face flushed, much hebetude, intellect confused, rambling when left alone. Abdomen distended; pain and gurgling in iliac fossæ. Area of splenic dulness enlarged. Temperature on evening of admission 103° F.; pulse 136.—April 10th: Next morning the temperature had fallen half a degree; pulse 128; respiration 30. Lungs normal; urine free from albumen; purged twice in the night, "pea-soup" stools. Tongue

covered with thick moist fur; very delirious in night; quieter now.—11th: But little change; more lethargic; purging increased; little subsultus tendinum. Morning temperature 102°; evening 102·8°.—12th: All symptoms increased in severity; one or two spots visible on abdomen; very prostrate and delirious, and much purged; temperature at eight A.M. 103·8°. From ten A.M. until eight P.M. five grains of salicylate were given every two hours with the following result:—At ten A.M. the temperature was 104°; at twelve, 104·2°; at two P.M. 104·4°; at four 104°; at six 103·6°; at eight 102·2°; at eleven 101·4°. After eight P.M. the same quantity every three hours. At two A.M. the temperature was 99°; at five 99°; at eight 99·4°. On the 13th at eleven A.M. 99°; at two P.M. 98·6°; at five 99·6°; at eight 100·6°; at eleven 98·4°. After six doses had been given the restlessness was somewhat increased, patient was very deaf, and urine contained a small quantity of albumen, but after increasing the interval between the doses from two to three hours these effects were abated, and she passed a fairly quiet night. The same dose was continued every three hours until eight P.M. on the 17th, when it was discontinued, the patient being quite calm and quiet, free from all delirium. The purging had diminished, the stools being semi-solid. She took milk and beef-tea willingly, and asked for more solid food. From this time the temperature never rose above 100°, and only reached this twice—i. e., on the evenings of the 23rd and 24th. She appeared fairly convalescent on the 20th, and was discharged on May 3rd thoroughly recovered.

In this case, as could be shown in others, it is scarcely to be denied that the action of the soda was most prompt in reducing the temperature, and in so doing modifying and checking the course of the disease. And in the use of any remedy for any ailment one's own individual experience as to the direct effect obtained, together with the ultimate result, is not to be set aside in favour of mere statistics, notwithstanding the importance of these when properly estimated.

To sum up as far as my own individual experience goes, I would say that in all those cases where the temperature *plus* the symptoms appear to demand the speedy reduction of the former, we have in sodium salicylate a means of reducing it as certain in its effects and far more easy of administration than the immense labour involved in the repeated application of the cold bath. Especially is it applicable to that large number of cases treated in ordinary private practice, if but a moderate and necessary attention be given to the effects and action of the drug. In all cases where there is a continued temperature in the axilla above 102°, there may be given to an adult bi-hourly doses of fifteen to twenty grains for the first twelve hours, half that quantity the next twelve hours, and continue this for two or three days, regulating the amount simply by rising or falling of the temperature; if it be kept below 100° not giving it oftener than every three or four hours. Where possible it is satisfactory to register it every two or three hours, but night and morning will suffice to show what effect the soda is having. Where the heart's action is already weakened it is of importance to administer alcohol in fair quantity with each dose. Perhaps the two conditions, where it is chiefly contra-indicated, are: where pre-existing renal disease is present, and in those cases where we have to deal with much lung complication. The use of alcohol in conjunction with the salicylate is frequently of marked benefit, for without doubt when pushed to extreme doses it has a depressing effect upon the heart's action; but certainly not more so than is often seen after the cold bath, which not unfrequently, in severe cases, is followed by a condition bordering on collapse. If well diluted it is but seldom that nausea, vomiting, or derangement of the stomach is produced, comparing favourably with quinine in this respect. The diarrhœa was usually lessened after its exhibition, though Dr. Greenhow, in some cases of rheumatism treated by him, thought that diarrhœa was induced by its use (*Brit. Med. Journal*, May 29th, 1880); and as Dr. Rutherford has shown it to be one of the most powerful biliary stimulants in the dog we might have expected to meet with increased purging from its use, but such is not borne out by the above cases. As to the excessive anæmia noticed by Dr. Greenhow as following its administration I have never seen it, although given in larger doses than he appears to have used. The only anæmic case was the 45th of the series, and this patient was apparently in an anæmic condition when attacked by the disease, and for some weeks after convalescence from the typhoid was the subject of pelvic cellulitis.

I hope hereafter to give the results of further use of this remedy, and trust that in the meantime others may be induced to make trial of it, and to record their experience of this, our most powerful antipyretic.

Manchester.

ON THE CONTROL OF DIARRHŒA IN ENTERIC FEVER.

BY JAMES W. ALLAN, M.B.,

SUPERINTENDENT AND PHYSICIAN, CITY OF GLASGOW FEVER HOSPITAL, BELVIDERE.

IT is, perhaps, better not to attempt to check the diarrhœa of enteric fever so long as it is mild—that is to say, as long as the motions do not exceed three or four in the twenty-four hours. But when the stools are very loose and copious, as well as frequent, it becomes a very desirable thing to control, if not to stop, the diarrhœa. Severe purging rapidly exhausts a patient. In the case of children the following measures may be tried:—(1) Boiling the milk which constitutes patient's diet; (2) boiling cinnamon in the milk, and straining it; (3) adding lime-water to the milk in varying proportions, say from one in four to half-and-half.

The above simple remedies are well worthy of trial. They have the great advantage, in the case of children, of not being "bad to take," and further, while the patient is taking the medicine, he is taking his diet (i. e., milk) at the same time.

In the case of adults the means just mentioned should first of all have a trial. If they fail we may then try (1) that excellent pill—lead pill with opium,—say one every three or four hours till the diarrhœa is restrained. This pill is very valuable in the treatment of purging, and it has the additional advantage of tending to relieve pain and check flatulent distension of the intestines. Should the purging continue, and especially if the desire to go to stool be urgent and persistent, we should at once resort (2) to the use of the starch and laudanum injection—say ten, fifteen, or twenty drops of laudanum in two tablespoonfuls of thick starch injected into the rectum. This is a capital remedy; it checks the diarrhœa, allays the irritation, and probably at the same time disposes the patient to sleep. It is perhaps unnecessary to add that no beef-tea should be given while there is diarrhœa.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

OLD-STANDING STRICTURE OF THE URETHRA; CYSTITIS; FOREIGN BODY IN BLADDER; EXTERNAL URETHROTOMY; SUPPURATIVE PERITONITIS; PERFORATION OF BLADDER; BEDSORE; DEATH.

(Under the care of Mr. BRYANT.)

FOR the notes of the following case we are indebted to Mr. Adeney.

Robert W——, aged thirty-nine, was admitted into Job ward on Dec. 8th, 1879. When eighteen years old he had gonorrhœa for three weeks. No injections were used. Three years after the gonorrhœa he noticed the stream began to grow smaller. Eleven years later internal urethrotomy was performed at the London Hospital. Relief only lasted a week, and then perineal abscess followed, leaving a urinary fistula. During the last four years he had passed a catheter himself. A few weeks before admission he began to pass catgut bougies, and on the 6th he passed one, but the next morning the stop had come off and the bougie had disappeared. A medical man

whom he consulted passed a No. 2 silver catheter, and the next morning he passed it again with great difficulty, and obtained about half a pint of urine.

On admission he suffered from acute attacks of violent straining and intense pain round the root of the penis. The bladder reached halfway to the umbilicus, but was not tense. A No. 2 elastic catheter was passed, and only a few drops of bloody fluid came away. On the 9th, under chloroform, an attempt was to be made to withdraw the catgut by a lithotrite; but, although the meatus was slit, the instrument would not pass. A bougie was next passed, and the urethra was found to be as rough as a rasp. Efforts were made to dilate the urethra, but failed. The patient was then put into the lithotomy position and a Symo's shoulder-staff was passed into the urethra; but, as it could not be determined whether the staff had entered the bladder, a careful incision was made in the middle line. The staff could not be felt at the bottom of the wound, so the incision was extended into the dilated urethra. A finger was introduced and the coiled catgut was removed. A No. 9 catheter was passed through the wound into the bladder, and about a pint of very offensive urine came away. A small sponge was placed in the wound and a large sponge threaded on to the catheter, and the whole bandaged up. After the dressing was completed, considerable hæmorrhage being apparent, the dressing was removed, and an artery, apparently the artery to the bulb, was found to be the cause of the bleeding. The patient had constant severe pains for days, for which subcutaneous injection of morphia was given each night. On the 18th, the buttocks were œdematous, and the skin was rubbed off with only very slight irritation. The patient was very restless, and complained that his feet were cold, but they were not apparently so. He swallowed milk and medicine with difficulty. The edges of the wound were sloughing, and pus could be squeezed out from beneath the dartos of the scrotum. In the afternoon an incision was made into the left buttock, and a considerable quantity of pus escaped. On the 22nd a considerable discharge had taken place from opening on buttock; a quantity of sloughing fascia was removed. On the 24th the vitality of the skin was very slight. There was superficial gangrene above the right iliac crest, and there was fluctuation just above this point. Redness over the left great trochanter. The tongue was very dry and red, with brown fur down the middle. On the 29th a slough was removed from above the right iliac crest. There was dry gangrene over the left trochanter. Next day the patient was getting weaker; he had no control over the sphincter ani, and liquid fæces constantly passed. Where the slough had been removed from above the right iliac crest was now a deep ulcer. The posterior border of the external oblique was seen in front. No pus discharged. There was a large amount of sloughing tissue about the abscess in the buttock. There was great pain on pressing on the spine of the sacrum and lower lumbar vertebræ.

The patient died on Jan. 3rd, 1880.

Temperature.—Dec. 10th: Morning, 99·3° F.; evening, 100·6°. 11th: Morning, 100°; evening, 100·4°. 12th: Morning, 100·2°; evening, 102.° 13th: Morning, 101·1°; evening, 96·6°. 14th: Morning, 98·6°; evening, 99°. 15th: 98°. 16th: 98°. 17th: Morning, 99·2°; evening, 98·5°. 18th: 96·8°; evening, 99·2°. 19th: Morning, 99·2°; evening, 98°. 20th: Morning, 98·4°; evening, 99·3°. 21st: 99·4°. 22nd: 98·2°. 23rd: 98°. 24th: 97·4. 25th: Morning, 100·1°; evening, 99°. 26th: 98·7°. 27th: 98·7°. 28th: 98·8°. 29th: Morning, 99·6°; evening, 99·4°. 30th: Morning, 98·4; evening, 99·3°.

Necropsy.—There was a dry slough over the left trochanter and superior iliac spine. A superficial slough on sacrum, and a large intermuscular abscess all over the left innominata bone. This could not be traced to any source, but it probably came from the perineum. Its tract was very small, and had previously closed. There was recent lymph on the pleura of the right upper lobe of the lung, as well as near the base, and over a patch of pneumonia. There were areas of pneumonia in both lungs, red and granular. The bronchi were dilated, and the smaller bronchial tubes were full of thick pus, constituting a formidable amount of papillary bronchitis. The larynx and the heart were both healthy. The small intestines gave a slight reaction with iodine. The liver weighed 48 oz.; slightly lardaceous throughout. The spleen weighed 4½ oz.; not lardaceous. The kidneys weighed 10 oz. Capsules adherent on both sides, and the surfaces minutely granular. The capsules on the right side were much thickened at one spot, as if there had been at some former time a perinephritis. The corresponding part of the cortex was not depressed. The right kidney contained one rather conical area of suppuration extending from the medulla to the cortex. The pelvis on this side was dilated and ragged, ecchymosed all over, and studded with irregular shields of lymph, and the apices of the pyramids were all sloughing; it contained offensive ammoniacal urine. On the other side there was some dilatation, but not much in the way of inflammation. The pelvis was pale, and at most had a few ecchymoses upon it. The right ureter was intensely inflamed all down to the bladder, dark and port-wine coloured. The left was healthy, except that its mucous membrane was slightly injected near its orifice in the bladder. Neither tube was dilated. The bladder was thick, but it was closely contracted. Its mucous membrane was much injected, and at the hinder part of the base in the median line, and at what was now the fundus, but was probably not so in the fully distended bladder, there was a sloughing hole, surrounded by swollen rugæ, covered with phosphates, &c. This hole led straight into the peritoneum, and was filled with a partially detached slough. This led into a localised abscess in the perineum. The urethra was very contracted from the meatus to the posterior part, so that it could not admit a No. 2 sized probe. It was slit up with difficulty. The prostatic part was dilated, and covered by a shreddy membrane and slough, and phosphates. One testicle was converted into a fibrous mass, with adherent tunica vaginalis, and a chalky mass in the centre. The other was much wasted, if not fibrous. The coats of the ileum were firmly adherent round the fundus of the bladder, forming a cavity two or three inches in diameter, lined by large granulations, and containing pus and fæcal matter. The latter proceeded from two or three apertures in the ileum, which had formed by extension of ulceration of the wall of the abscess. There was a quantity of pus in the peritoneum and various places, all shut off and localised; it was also thick and creamy; in Douglas's pouch there was a large quantity, in the left iliac region in front of the kidney; there was also much behind the right lobe of the liver. The omentum was firmly adherent over all. The suppuration must have been of some date longer than a month. On the other hand, it is difficult to suppose that the patient was going about with the bladder perforated, and the peritoneum suppurating. If it was after his admission, then was the early lardaceous disease of more than twenty-six days' date, or was it in part due to some old cystitis?

STRATFORD-ON-AVON INFIRMARY.

SMASHED ELBOW; AMPUTATION; ANTISEPTIC ABSORBENT PADS; RAPID HEALING.

(Under the care of Mr. LUPTON.)

GEO. G——, aged eighteen, was brought to the infirmary on June 17th, 1880, by Mr. Millican of Kineton. The patient worked at a clay-puddling mill, and getting his arm caught by the machinery, it was drawn in and "puddled" with the clay. The joint was disintegrated, and the brachialis anticus and triceps were stripped up from the humerus; the brachial artery was severed, and the skin was much torn and lacerated. Amputation in the middle third of the upper arm was immediately performed by Mr. Lupton by skin flaps and circular division of muscles. The vessels were tied with carbolised catgut, prepared by Krohne and Sesemann, and the ends were cut short. The stump was cleansed with carbolic lotion (1 in 40), and covered with the "antiseptic absorbent pads," as recommended by Mr. Sampson Gamgee, and prepared by Southall Brothers and Barclay. The wound was first dressed on the 20th under carbolic spray, and was only exposed to an antiseptic atmosphere at each subsequent dressing. Gamgee's pads were used next the wound, and covered with a large layer of cotton-wadding.

The progress of the case was all that could be desired. At the second dressing, June 22nd, the discharge was only just sufficient to soak through one pad. At no subsequent dressing was a pad soaked fairly through. Healing proceeded very rapidly, and on the seventeenth day after the operation the wound was quite sound, and the patient sitting

up to dinner in the ward. Nothing more was seen of the ligatures.

SMASHED HAND; ATTEMPTED "CONSERVATIVE SURGERY"; GANGRENE OF FLAPS, WITH INFILTRATION ABOUT WRIST; RE-AMPUTATION IN FOREARM.

(Under the care of Mr. LUPTON.)

William C——, aged forty-seven, an army pensioner, twenty-one years' service, including the Mutiny and much arduous service, was admitted on November 8th, 1880, suffering from a smash, caused by a trolly-wheel passing over his hand. The thumb and second, third, and fourth fingers were completely smashed, and their integuments destroyed. The index finger had escaped. There seemed a chance of saving this; accordingly the thumb, with its metacarpal bone, and the remaining three fingers, were removed. The flaps formed, however, were too seriously injured, and sloughed, the whole assuming an unhealthy and gangrenous appearance, while the integuments about the wrist were infiltrated and "boggy," and the patient suffered constitutionally. Consequently, on Nov. 16th Mr. Lupton re-amputated in the lower third of the forearm, cutting skin-flaps clear of the infiltrated area, and dividing the deeper parts by circular incision. The remaining treatment was precisely that of the former case; and the subsequent progress of this case was also satisfactory, the patient leaving the infirmary with a sound stump on February 1st, 1881.

KASHMIR HOSPITAL.

A PULSATING BRONCHOCELE; LIGATURE OF THE VESSELS; RELIEF.

(Under the care of Dr. DOWNES.)

IN August, 1877, a boy aged about ten, having a large bronchocele, applied at the hospital. His appearance was altogether peculiar; he was rather deaf and slightly idiotic. The goitre was enormous, quite as big as the boy's head, and on both sides of the neck at the upper part of the tumour were arteries which pulsated forcibly. The vessels stood out on the surface of the tumour and pulsated with such force as to make the whole tumour move; the artery on the right side was much more distinct than the one on the left. It was resolved to tie these two arteries. The operation was much more difficult than had been anticipated, but was facilitated by the assistance of Drs. Williams and Ross of the Indian Medical Service. The patient was put under chloroform, and an incision was made about two inches and a half long through the skin over the pulsating artery on the right side from a point near the angle of the jaw, directly downwards, and the fascia divided carefully with a director. Here the difficulty began. The lobules of the hypertrophied gland were soon encountered, then with a director and the handle of the scalpel progress was very slowly made till the artery, which was accompanied by a large vein, was seen. The artery, notwithstanding its superficial appearance, was really at a great depth. An aneurism needle was placed under it, and the vessel tied with a stout silk ligature, leaving one end hanging out of the wound. The wound was closed with a couple of sutures, and then a similar operation was done on the other side. Next day the patient was feeling pretty comfortable, and there was no pulsation; after about three days severe fever set in suddenly; his temperature rose to 105° F. This high temperature was brought down to normal by a few doses of ten grains of salicylic acid. For two or three days the temperature rose again, but was always brought down in the same way. Every day the tumour was reduced in size; on about the eighth day it was only half its original dimensions. He then asked permission to leave the hospital, but he was urged not to go, at any rate until the ligatures had separated. However, on about the tenth day he ran away at night, carrying the ligatures with him. Two years afterwards this boy was said to be still alive, and the goitre to have quite disappeared.

Remarks by Dr. DOWNES.—Whether the above information be true or not, the fact that on about the tenth day the tumour was only half its original size, encourages one to think that wherever a very large goitre exists with pulsating arteries, a cure may be obtained by tying the arteries in the way above described. The operation is, however, somewhat troublesome, and not without danger. Such a high temperature is uncommon here after even very severe operations.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Eczema of the Nipple and Cancer of the Mamma.—Cystic Degeneration of Breast.—Cystic Disease of Kidneys and Liver.—Cystic Disease of Fœtal Ovary.—Cancer of Mediastinal Glands.—Localised Pneumothorax.—Aortic Disease.—Pulmonary Thrombosis.—Uterine Polypus.—Malformation of Hand.

THE ordinary meeting of the Pathological Society of London was held on Tuesday, March 15th, Samuel Wilks, M.D., F.R.S., in the chair.

Dr. THIN showed specimens from and gave an account of two cases in which long-standing Disease of the Nipple and Areola was followed by the development of tumours in the breast. The first case was that of a single woman, aged forty-nine, whose breast was removed by Mr. Henry Morris. The nipple had been irritated for some weeks by a needle in the woman's stays six years previously to the tumour being observed. The irritation set up had never healed, and at the time of operation the position of the areola was marked by a bright red, moist surface two inches in diameter, a depression in the centre indicating where the nipple had been. The margin of this surface was sharply marked off from the healthy skin. On microscopical examination it was found that the centre of this area was denuded of epithelium, the cancerous growth forming the surface of a superficial ulcer. On the outer part of the area the epithelium was entire, but thickened, with elongated papillæ. The papillary layer of connective tissue was here destroyed, and the space it should have occupied was filled with exudation cells. The distinguishing features of the breast tumour were an excessive development of fibrous tissue and rounded clusters of cells, with a columnar epithelium lining the cavities in which they lay. On the edge of the growth the new epithelium was seen as small round columns with a central lumen, the condition termed by some pathologists adeno-fibroma. In the second case the breast was removed by Mr. George Lawson. The patient, an unmarried woman, aged fifty-seven, had suffered from the nipple affection for upwards of a year. There was no pain in the breast, no perceptible tumour, and no enlargement of the axillary glands. In the diseased skin in this case the epidermis was entire, but thickened, with long papillæ. The papillary layer of connective tissue had disappeared, and a stratum of exudation cells had taken its place. The breast consisted of a large mass of fat, permeated with narrow streaks of fibrous tissue. In these streaks a new epithelial growth was found in the form of tubes and round cell-clusters, with small cells and a distinct border of columnar epithelium. The narrow strips of fibrous tissue always separated the epithelial growth from direct contact with the fat lobules of which the large breast was almost entirely composed. The tumour would probably be called an adeno-lipoma. These two cases completed six which Dr. Thin had examined. Although these six cases all differ from each other in some respects, they agree in some essential points, and on these points of agreement Dr. Thin concludes that the affection of the nipple is neither eczema nor psoriasis, nor any known specific skin disease. It is a destructive papillary dermatitis, and he proposes that it should be called malignant papillary dermatitis. The breast tumours take their origin from the epithelium of the lactiferous ducts, and retain the specific characters of that epithelium. A complete account of an instance of the scirrhus, or parenchymatous type of cancer in connexion with this affection, has not yet been published. A local affection of the points on the surface of the nipple, which correspond to the mouths of the lactiferous ducts, has preceded in cases which have been well observed the exten-

sion of the disease over the surface of the nipple and over the areola. The hypothesis that best explains the fact that a malignant papillary dermatitis spreads superficially from the mouths of the ducts, and that an epithelial growth spreads downwards from them into the breast, is that the duct epithelium at the surface undergoes changes that are in their early stages already cancerous in their essential nature.—Dr. WILKS asked if Dr. Thin considered the skin affection the first development of the cancer.—Dr. THIN explained that the first change was found at the mouths of the lactiferous ducts, from whence it very slowly spread out, and later on formed a cancerous tumour deeply in the mamma; the change in the skin must therefore be cancerous in its nature.—Mr. H. MORRIS wished Dr. Thin could have obtained some cases in the earlier stage. From clinical observation he had found the affection of the skin indistinguishable from eczema, and it was only from the duration and intractability of the cases that the diagnosis of these cancerous cases could be made. In one case he had seen, three years before the appearance of a cancerous tumour, there was no evidence of any cancerous disease. In the same way cases of dilatation of acini and ducts may go on for a long time, and then either get well or inflame or become cancerous, the primary disease not having been malignant.

Mr. MOULLIN showed drawings of a case of Cystic Degeneration of the Breast. The patient was a single woman, forty years old. In eight months the tumour had become three times the size of the normal mamma. The tumour was removed; no trace of normal gland tissue was found, but the mass consisted of a number of cysts from the size of a pea upwards, lined by a smooth membrane, and containing gelatinous fluid; no intra-cystic growths. The cysts were shown to be derived from normal acini, which were separated from each other by circular growths of fibrous tissue, the epithelium increased in quantity, and became ultimately a single layer of squamous cells. On the outside of the acini delicate nuclei were seen, which developed into stellate cells, and, later on, spindle cells, parallel rows of which surrounded the cysts. A delicate structureless membrane was found between these cells, which had no connexion with the fibrous tissue of the mamma. The change had evidently taken place in all parts of the gland concurrently. The specimen was referred to the Morbid Growths Committee.—Dr. THIN stated that he had shown some specimens of the same change of the membrana propria of the acini of the mamma at the Medico-Chirurgical Society, and he thought Gross had described it too.

Dr. PYE-SMITH showed the Liver and Kidneys of a man, aged fifty-three, who had died of chronic interstitial pneumonia; of intemperate habits, he had suffered from cough for years; his arterial tension was increased, his urine abundant, pale, and occasionally albuminous. He died worn out by his pulmonary disease. Post-mortem: The kidneys weighed 64 oz., and were a perfect specimen of complete cystic degeneration of the whole gland with hardly any renal tissue left. The liver also contained several cysts, and was in addition lardaceous. The remarkable combination of cysts in liver and kidneys is still very rare, and was first described by Virchow as a fœtal and more rarely an adult change; and he remarked that in young children death took place from dyspnœa, the large cysts pushing up the diaphragm. Dr. Bristowe and Dr. Wilks showed two cases at this Society in 1855. The most remarkable point of this case is the man's age, and the fact that, although he had drunk heavily for thirty years, he had no symptoms of uræmia. The evidence is in favour of the cystic change being congenital in all cases; such cysts, we know, are present in new born children. Under the microscope all that is not cyst is kidney, and there is really a good deal of functionally active tissue; there is no adventitious growth.—Dr. N. MOORE thought the large quantity of liver and kidney tissue always found explains the fact of these patients living. The cases he showed last year evidenced this. Occasionally kidneys contain only a single cyst, he recently found one very large cyst close to the hilus in each kidney, the kidney structure being healthy; this was the minimum condition of the same affection.—Dr. WILKS asked if the disease of the liver was to be considered congenital.—Dr. GOODHART had examined the specimen shown very carefully, and had come to the conclusion that it was not congenital. The changes in the liver are in the portal canals, in which there is some cirrhotic material, which, however, is peculiar, being more varied than usual. The fibrous tissue is more embryonic, and the nuclei varied in size and shape, suggesting that it is a large overgrowth of muscular fibre, which, compressing the ducts, may cause cysts. There is also an increase in size of the peripheral lobular cells, with proliferation of their nuclei, which can be traced developing into the long muscular cells. There are very numerous cysts, some of which are probably formed by vacuolation of the cells. The fibrous tissue of the kidney is also peculiar, and like that in the liver. There is also a large overgrowth of the epithelium of the large tubes, which are then dilated into cysts. Thus in both kidneys similar processes are at work, but the tendency of the disease is shown by its different course in the two organs. The great majority of cases show no symptoms during life, and if it is really an overgrowth of renal tubes such might be expected. The Malpighian tufts seem to be considerably diminished.—Dr. PYE-SMITH would examine the specimens again, and make fresh observations from Dr. Goodhart's point of view. He had not noticed any increase of fibrous tissue in the kidney. Virchow has figured a great increase of fibrous tissue in the fœtal cystic kidneys. He had considered the cysts in the liver also congenital.

Mr. ALBAN DORAN showed a case of Cystic Disease of the Ovary of a Fœtus of seven months. The other ovary was perfectly healthy. The cysts were from one-twelfth to one-sixteenth of an inch in diameter, lined with ciliated epithelium, and containing dendritic growths; between them were smaller morbid cysts, also lined by ciliated epithelium. He had never heard of proliferating cysts in the fœtus, the only cystic disease of the fœtal ovary being described as developed from the Graafian follicles. There are no Graafian follicles in this ovary. A part of the Wolffian body normally remains in the normal ovary as epithelioid bodies; but the Wolffian tubes, of which these are the atrophied remains, would seem in this case to have enlarged into these proliferating cysts, at the expense of the development of the Graafian follicles. Micro-photographs of the specimens were shown.

Dr. S. WEST showed a case of Cancer of the Mediastinal Glands. A woman, aged forty, had had a tumour in the left breast seven years before death. Four years afterwards it became very painful and was removed two years and a half later. Six months before admission to Victoria Park Hospital she had pain on the right side, and was admitted with the signs of right pleurisy and mediastinal tumour, and some small lumps were found in the right breast. Post-mortem: The small nodules were found to be continuous with a great cancerous mass filling up the anterior and posterior mediastina and involving the whole right pleura. The lower lobe of the right lung had almost disappeared. The cancer was also widely disseminated over the peritoneum and into the liver. The connexion between the cancer of the left breast and the mediastinal cancer is interesting. The patient was tapped twice without success, although two pints of fluid were found after death. This was probably due to want of contractile power in the walls of the cyst.

Dr. S. WEST showed a specimen of Pneumothorax. A man aged twenty-two, ill for five months with cough, pain in left side and wasting, very extensive disease of left lung, with a large cavity in apex and base. He was suddenly seized with severe pain, expectorated a large quantity of pus, and the breathing became intensely amphoric, due to a localised pneumothorax with an opening in the lung 3 in. by 2 in. This case illustrated also the insidious origin of large pulmonary cavities.

Dr. MORRISON showed a Thrombus in the Pulmonary Artery. The patient had phthisis, gangrene of lung, and slow death; no embolic symptoms. At the post-mortem extensive pleural adhesions in right pleura: excavation and caseation of lung; a thrombus—partly recent, partly purely fibrinous—was found extending from the orifice to the extremest ramifications of the pulmonary artery, no clotting in veins.

The following card specimens were shown:—1. Disease of Aortic Valves, by Dr. S. West; there were only two cusps, in one of which was a large rupture. 2. Large Polypus growing from the Cervix Uteri, by Mr. G. H. Morgan. 3. Arrested Development of Upper Limb, by Mr. S. G. Shattock. There was webbing of the fingers, and on dissection the flexor longus pollicis muscle was found to send a tendon to the index finger to take the place of the tendon of the flexor profundus digitorum; this is a normal condition in the highest apes.

CLINICAL SOCIETY OF LONDON.

Fracture of the Spine treated with Sayre's Jacket.—Excision of the whole Tongue.—Round-celled Sarcoma of the Thigh treated by Amputation at the Hip-joint.—Bronzed Skin without Constitutional Symptoms.

THE ordinary meeting of the Clinical Society was held on Friday, March 11th, J. Lister, Esq., F.R.S., in the chair.

Mr. BERKELEY HILL showed a young man who had had a fracture of the Lower Dorsal and Upper Lumbar Vertebræ treated with Sayre's jacket, and who had recovered with only slight deformity of the spinal column. The patient fell twenty feet, and sustained fracture of the laminæ of the tenth dorsal vertebra and others, as far as the second lumbar. There was angular projection of these spines, and mobility of two of them. On admission to University College Hospital he suffered from severe concussion of the brain and spinal cord; next day he was in severe pain. Twenty-four hours after the injury he was placed on a table swinging at the middle, and on it raised and suspended by his head and shoulders, and a plaster jacket applied. There was immediate relief to the patient's sufferings, and no bad symptom followed, except loss of control of the left lower extremity for about thirty-six hours, and temporary extreme hyperæsthesia of a patch of skin on the dorsum of the same foot. The jacket was removed seven weeks after the injury. Now, 101 days after the accident, he can walk; his spine is strong, and the only sign of the serious injury is a moderate projection of the lower dorsal and upper lumbar spines and displacement of the laminæ of the eleventh dorsal and first lumbar backwards on the right side.—Dr. BUZZARD observed that the patellar tendon reflex was much exaggerated on the left side, and that he had ankle or foot clonus on that side too, which is like that found in Pott's disease, where the paralysis is due to inflammation of the cellular tissue under the dura mater leading to a slight spinal myelitis. This lad has therefore some interference with the transmission of motor impulses up the lateral columns of the cord, probably from callus under the dura mater at the seat of injury.—Mr. LISTER thought the mobility of the spinous processes very interesting; traumatic acute spinal curvature, which is most often without paralysis, is produced by fracture of the bodies of the vertebra, but here in addition to this there was injury to the spinous processes. It is impossible to say how this was produced; the curve must have been produced by a fall on the breech or head. He had never seen the spines injured from this cause. The result of the treatment in this case was most satisfactory; in ordinary cases the recumbent posture is sufficient.—Mr. H. BAKER asked if Mr. Hill found the jacket useful when the man was up and about.—Mr. B. HILL considered that the youth had struck his spine in falling. He was kept in bed for three weeks, but the jacket was worn altogether seven weeks.

Mr. BARWELL showed a case on which he had performed Excision of the whole Tongue by means of a small suprahyoid wound, and remarked on the best material for the loop of écraseurs. James A——, aged sixty, without parental history of cancer, had enjoyed good health till a year ago, when a small lump appeared at the side of his tongue. This was twice removed by ligature, probably inadequately, since on each occasion it quickly recurred. Admitted into Charing-cross Hospital on Feb. 11th, 1881, the whole tongue almost to the foramen cæcum was covered by an ulcerated, very dendritic growth, interspersed with deep ulceration. Saliva was constantly flowing from his mouth, and wetting his clothes. He was feeble from difficulty in eating, and had lost flesh; pulse 108, small and weak; no enlarged glands. The growth is the result of less than seven months. Two days later the tongue was excised. An incision about one-third of an inch long just in front of the hyoid bone exposed the raphé of the mylohyoid, which, being divided, bared the edge of the genio-hyoglossus. These muscles, separated with the handle of the scalpel, enabled the operator to feel the base of the tongue and the deep surface of the buccal mucous membrane. A Liston's needle passed into the wound entered the mouth just behind the left last molar tooth, the thread being left. The same was done on the right side, the loop of the cord being in the mouth. To the first cord the end of an écraseur wire was tied and so drawn into the mouth, its end being freed from the first thread was hooked into the loop of the second and drawn round the back of the tongue, out of the wound, and fastened to the écraseur. A Liston's needle was then passed into the wound through the middle of the tongue, and, guided by the operator's finger, was made to emerge well behind the disease. This needle guided the wire as it was tightened along the required line. As soon as the back of the tongue was thus severed, another écraseur was placed behind the incisor teeth, and its loop passed well down in the previous section. Thus the tongue was freed from the floor of the mouth and taken out from between the lips. If the écraseur be slowly used the operation is almost bloodless, and leaves no external scar or mutilation, and the tongue can be removed from immediately in front of the epiglottis with as much ease as the tip. As the sensory nerves are divided close to the jaw, the patient suffers hardly any pain afterwards. The wires supplied by instrument-makers are of steel, and tempered; they are too stiff, and the twisted wire-cords are not reliable. The soft iron wire used for park fencing, and supplied by Messrs. Newall, makes a very strong écraseur loop, and is so flexible as to be very manageable. Mr. Barwell also recommended the use of an écraseur which tightened the loop from both ends. The patient was shown. The stump of the tongue was in very good condition, cut off clean at the back. His general health had improved since the operation. He got up on the tenth day, and was ready for discharge two days later, but was kept in a few days longer.—Mr. HEATH thought the great objection to Mr. Nunneley's operation was the very oblique section of the tongue. Mr. Barwell's operation got over this difficulty no doubt, but he thought it better to divide the sublingual tissues first with the knife or scissors. The tongue can then be drawn well forward, and its section far back easily made. Mr. Barwell's wire was good. It is very remarkable how the stump of a tongue grows. He had lately seen a case in which he had operated ten years ago, removing all the tongue. The appearance was as if none of the organ had ever been removed.—Mr. M. BAKER thought that in all the operations like Mr. Barwell's it was impossible to prevent an oblique, and therefore unsatisfactory section of the tongue, especially in a diseased tongue, through which the needles placed in any position are readily pressed forwards. Where the disease has spread from the tongue it is better to strip up the mucous membrane from the floor of the mouth very freely. He was at a loss to see how the nerve could be divided so as not to leave its central end sensitive.—Dr. POORE said the man talked uncommonly well; he could say "theatre" and "tittle-tattle," which require tongue movement.—Mr. BARKER asked why this operation is regarded as painless. Did Mr. Barwell consider this different from Cloquet's operation proposed fifty years ago. He also asked if this form of papilloma is often met with; he himself had only seen it once in a case under Mr. Marshall, at University College Hospital.—Dr. GILBART SMITH stated that he had recently had a patient with large papillary growths on the back of the tongue, one or two of which had entangled the epiglottis and caused difficulty in swallowing. He had seen other similar cases.—Mr. LISTER thought the wire more satisfactory than others at present used. It combined pliability with sufficient strength. If the whole tongue was removed, the amount at present seen in the mouth was most striking; perhaps Mr. Baker's suggestion of the oblique section explained it; at any rate, the man had now a good two-thirds of the tongue. This was certainly a great improvement on Mr. Nunneley's operation. In cases of the removal of the whole or one-half of the tongue, he had found division of the jaw in the middle line most satisfactory; it is easy then to control the artery and to limit the excision. With other plans he had found it difficult to be certain of taking away enough without removing too much.—Mr. BARWELL replied that he had never performed Syme's operation. The period of recovery after it was very long, and the proceeding was altogether very severe. Much blood may be lost by severing the base of the tongue in Paget's operation. This man lost one to one ounce and a half of blood, which was more than usually happens in his own operation. The operation is painless, because the nerve is cut close to the gustatory groove, and retracts away from irritation. If a large Liston's needle is used to fix the écraseur and firmly held it does not slip; the specimen showed the section to be quite straight. When the man left the hospital there was no appearance of the mass of tongue seen now, but a square gap reaching far

back. He had no distinct recollection of Cloquet's operation, but he thought that in it a twine ligature was passed through the middle of the tongue.

Mr. BERKELEY HILL related the sequel of a case of Round-celled Sarcoma of the Thigh, treated by amputation at the hip-joint, in which the whole of the anterior flap sloughed, which he recorded in the Clin. Soc. Trans. The woman died six years after the operation from tuberculous pyelitis, which, during the last three months of her life, caused an abdominal tumour, which was mistaken for a new formation of the original growth. There were no growths of sarcoma found in any of the organs or tissues.—Mr. LISTER remarked on the great interest of the case, inasmuch as round-celled sarcoma is regarded as the most malignant form of sarcoma, but this was an example of its complete cure by local removal. It showed that our knowledge does not warrant us in speaking with certainty about the clinical history of any tumour from its histological characters; we are only warranted in stating the probability and the average course of such tumours; even a fibroma may prove malignant.

Dr. RADCLIFFE CROCKER read a case of general Bronzing of the Skin without constitutional symptoms, which had been shown at a previous meeting. The patient was a sailor, a native of North Sweden, aged twenty-two, of stout build, and in good health. The pigmentation came on after exposure to severe weather eight years ago, attained its full development in a few days, and has not extended or diminished since the first week, though he thinks he is paler sometimes than at others. The skin of the hands, backs of forearm, legs below the knee, and the mucous membrane are unaffected, but all the rest of the body is darker. The pigmentation has no sharp line of demarcation on the limbs and face, but shades off to the normal. The general hue was a yellowish-brown; but the neck, axilla, nipples, umbilicus, penis, and scrotum were brown or black. The abdomen and interscapular scapulæ were darker than the general hue; while the man who is on duty at night is supposed to be ready at a moment's notice. On the neck and axillæ were closely developed papillary growths about one-eighth of an inch long, and the natural lines of the skin were everywhere developed. Repeated alkaline baths and friction had no effect upon the discolouration. Microscopical examination of the skin of the abdomen showed the pigment to be deposited in the deeper cells of the rete, though pigment granules were to be seen both in the layers above close and to the papillary vessels of the corium. The corneous layer encroached upon the interpapillary part of the rete mucosum, so that that part formed a narrow layer of uniform thickness moulded upon the frillæ, which were elongated apparently by protrusion downwards of the interpapillary processes. The papillary growths upon the neck consisted of an oval growth of the papillary layer of corium, involving several elongated papillæ. The pigment was in the same position as elsewhere, but there was no alteration in the arrangement of the epidermic layers. Dr. Crocker was unable to offer any satisfactory explanation of the pathology of this condition, but negatived the idea of its being due to phtheiriasis, as was suggested when the case was shown to the Soctety.

Dr. CARRINGTON showed a case of Bronzed Skin without Constitutional Symptoms. J. B——, aged twenty-five, a native of Dantzic, was admitted into the Seamen's Hospital on February 16th, 1881. He did not become a patient on account of the condition of his skin, but for an attack of acute bronchitis. The patient left India during July, 1880. He had a very rough and lengthened voyage, and was continually wet through. About the eighth or ninth week out he began to suffer from severe pruritus, the parts affected being the back and arms. At this time he changed his clothes, and he maintains that his skin was then white as usual. On the second day he again changed his clothes, and he then found that his skin had turned brown. It was also dry and stiff, and on attempting to nip it between the fingers it cracked. His gums and teeth at the same time were perfectly normal. About a fortnight after he noticed an eruption of small pimples on his arms and legs; these became little blisters, and exuded fluid on their rupture. These latter ran together. His limbs assumed the appearance of being scalded. The weather was very wet and cold at the time of the attack, and there was no sunshine. The patient remained much the same up to the 15th week, when swelling of the legs supervened. In October, 1880, he landed at Rotterdam, and was there treated for three weeks by arsenic. He again took ship, and in October, 1880, he became a patient in the Newcastle Infirmary. He was there told that he was suffering from scurvy; but none of his shipmates had contracted that disease. Whilst in the infirmary he was treated with sulphur baths twice a day for a month, and was made to lie in bed between blankets. The colour of his skin did not alter during his stay. On Feb. 16th, 1881, he was admitted into the Seamen's Hospital for an attack of acute bronchitis. There is no history of syphilis. A year ago he had an attack of ague lasting three days. On admission he presented the appearance of a well-nourished muscular man, with black hair and blue eyes. His skin was dry and harsh, but fairly pliable. It was, with the exception of the face, hands, and feet, stained of a medium walnut-brown colour. There was a diffused uniform tint, mottled with a darker shade of brown. The colouration was more uniform on the trunk than on the extremities, where it became somewhat patchy. The areolæ of the nipples were very dark, and the axillæ and genitalia were also somewhat more deeply stained, but certainly not to a marked extent. He had also a well-marked attack of scabies affecting his feet and hands and buttocks. There was no pigmentation of the mucous membrane of the mouth and pharynx. The heart sounds were well marked and distinct. He had the physical signs of bronchitis. The liver dulness reached two inches below the costal margin. The spleen was not enlarged. The above description applies to him now equally as well as on admission, except that his scabies has been cured by treatment with sulphur ointment and baths. He feels perfectly strong and well—as indeed he has all along, except for his pulmonary trouble. A thin section of the superficial part of the skin showed abundance of pigment in the epithelial cells, but no fungus. A patch on each side of the chest has been well treated with a saturated solution of hyposulphite of soda, but without effect. With regard to a possible suggestion that the colouration was due to scratching from the irritation of the scabies, Dr. Carrington did not think this probable, both because the limits of the pigmentation far exceeded those of the supposed cause, and also because it was almost certain that he could not have been suffering from this affection all the time, the baths at Newcastle would then have cured it. This was the more probable, as he had rapidly recovered from this part of his trouble whilst under treatment at the Seamen's Hospital. The scabies had most probably been contracted at a later date. On his admission at Greenwich he was certainly not scorbutic; his gums were perhaps a little pale, but there was no hæmorrhage. Neither was it possible that the pigmentation was due to the slight attack of intermittent fever, for it is only found in the severe chronic cases.—Mr. LISTER said both the cases were very remarkable, from the sudden advent of the bronzing without any constitutional disturbance.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

Annual Meeting.—Diarrhœa in Phthisis.—Defects of Vision from Railway Collision.

THE annual meeting was held on the 7th inst., F. J. Gant, Esq., President, in the chair. The report of the Council was read and adopted, and the ballot for the election of officers and Council for the ensuing year was taken, when the following were declared elected:—President: Dr. Broadbent. Vice-presidents: Dr. Wiltshire, Mr. J. W. Barnes, Dr. Quain, Mr. Brudenell Carter. Treasurer: Mr. Francis Mason. Librarian: Mr. Royes Bell. Secretaries in ordinary: Dr. Gilbart Smith, Mr. Edmund Owen. Secretary for foreign correspondence: Dr. Berkhart. Council: Mr. H. F. Baker, Dr. Percy Boulton, Dr. Bucknill, Dr. Sidney Coupland, Mr. Hamilton Craigie, Mr. Cumberbatch, Dr. W. H. Day, Dr. T. S. Dowse, Sir Joseph Fayrer, Mr. F. J. Gant, Dr. Clement Godson, Mr. D. H. Goodsall, Mr. Alfred Pearce Gould, Dr. W. R. Gowers, Dr. F. de Havilland Hall, Mr. Malcolm Morris, Dr. Heywood Smith, Mr. W. F. Teevan, Dr. J. C. Thorowgood, Dr. C. Theodore Williams. The subject for the Fothergillian Essay for 1883 was announced—viz., "The Treatment of Thoracic Effusion." The ordinary business was then proceeded with.

Dr. C. THEODORE then read a paper "On the Pathological Treatment of Diarrhœa in Phthisis." He enumerated three

different varieties met with in that disease—1st. Disease from the primæ viæ. 2nd. Diarrhœa from ulceration of the intestines. 3rd. Diarrhœa from lardaceous disease of the intestines. The first was due to over-feeding, an error often committed in the treatment of phthisis, but easily remedied. The second was the most serious form, often proving fatal. Intestinal ulceration was detected after death in five-sixths of Louis' cases, in sixty-seven per cent. of Lebert's, and 81 per cent. of the Brompton Hospital cases, the amount of mucous membrane involved varying in different cases. The small intestine appeared to be the first attacked, and especially the neighbourhood of the ileo-cæcal valve. The stages of the disease consisted of—(1) Inflammatory hyperplasia of the solitary and agminate glands; (2) their conversion into small abscesses, or their caseation; (3) the discharge of their contents, leaving behind ulcers with smooth floors and sharp edges; (4) formation of grey tubercle in floor of ulcer, and its subsequent caseation, leading to extension of the ulcer, and its junction with neighbouring ulcers, until the whole intestine becomes a mass of ulceration. Thickening of the peritoneal coat generally takes place in the vicinity of the ulcer, and thus perforation was not common. Sometimes, however, it takes place and sets up local or general peritonitis, ending in death. Occasionally ulceration into a small vessel causes alarming hæmorrhage, and is known to heal, leaving a thickened scar, which causes a constriction of the intestine. The clinical symptoms of ulceration were, persistent diarrhœa, tongue characteristic of great irritation, pain in the abdomen, tenderness over the ulcerative process, and rapid wasting. Tenderness was in the author's experience more common in the left iliac region than in the right. The disease appeared in the small intestine, but created greater ravages in the large one, and advanced rapidly, and this was to be accounted for by the traction on the ulcers from the changes in the size of the colon during digestion, by the slow progress of the fæces and the disengagement of foul gases in this region, giving rise to conditions unfavourable to the healing of ulcers. Pyrexia depended upon the amount of ulceration. If only a limited surface was attacked it was absent, but if large tracts were involved the chart showed great extremes and marked fitfulness. Ulceration might exist without causing diarrhœa, but such cases were rare. The forms of diarrhœa in phthisis arising from lardaceous disease corresponded with colliquative diarrhœa. It prevailed, in the latter stages of the disease, and often alternated with the profuse night sweats. It differed clinically from the ulceration in the state of the tongue and nature of the stools, and was not necessarily attended with pain. The chief feature was the infiltration of the tissues, and especially of the villi and their vessels, with lardaceous material. The treatment of the first form was by alterative and antacid medicines and careful regulation of diet; treatment of the second form must be directed towards treating the ulcers, and consisted of rest in bed; the use of bland non-irritating food, counter-irritation to abdomen by poultice or blister; opium and sulphate of copper by mouth, or, if large intestine be involved, by opiate enemata combined with astringents and sometimes antiseptics. Morphia suppositories or injections containing opium were useful. Treatment of third form chiefly by astringents.—Dr. DE H. HALL thought in some of these cases diarrhœa was caused by swallowing fetid expectoration; he preferred the use of gallic acid rather than tannic.—Dr. JAGIELSKI referred to the necessity of treating these cases with due regard to the totality of the symptoms. He advocated restricted diet.—Dr. GILBART SMITH asked Dr. Williams if there was any relation between largyngeal phthisis and tubercular ulceration of the intestines.—Dr. HERON had seen marked benefit derived from use of the liquid extracts of bael in two drachm doses every four hours. He referred to the influence of locality in intestinal ulceration in phthisis.—Dr. WILLIAMS replied that in his hands tannic acid had proved more useful than gallic. He had not noticed any connexion between laryngeal phthisis and intestinal ulceration.

Mr. WORDSWORTH then read a paper "On the Defects of Vision attributed to Railway Collisions," speaking only of those cases in which no structural lesions can be discovered, of which he had seen about twelve who complained of dimness of vision, &c., and inability to apply themselves continuously to any occupation requiring the use of their eyes. On examination no signs of injury beyond slight hyperæmia of the fundus oculi were discovered. Yet in all the cases they received considerable pecuniary compensation for the injuries, on account of the unfavourable prognosis that had been given. He had ventured to give a more cheerful opinion as to the ultimate recovery, and, so far as he had been able to trace the cases since, he believed they all recovered on the settlement of their claims, and had resumed their wonted occupation. He remarked on the fact that medical men are seldom consulted in these cases except with a view to their assisting to obtain compensation; stated that in a long experience in hospital and private practice he had never seen any of these cases simply as patient either before or after the settlement of their claim for compensation. These are circumstances which give rise to a doubt whether they are really *bonâ fide* cases, and are entitled to the importance that has hitherto been attached to them.—Mr. MCHARDY asked what time elapsed after the accident before these ocular changes became visible.—Mr. BENTON mentioned a case of a lady having fallen on the side of her head; suffered from concussion. The right side twitches; sight affected three weeks after with hyperæmia of the left disc, which disappeared with complete recovery.—Mr. WORDSWORTH, in reply, stated the cases referred to by him manifested no retinal changes.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THE ordinary meeting of this Society was held on Thursday, March 10th, W. Bowman, Esq., F.R.S., in the chair. There was a large attendance of visitors in view of a discussion on the relation between optic neuritis and intracranial disease, which was opened by Dr. Hughlings Jackson, F.R.S. As this paper occupied nearly the whole evening, the discussion was adjourned to a special meeting, to be held on Thursday, March 31st. A second special meeting to receive and discuss the report of the Committee on Colour Blindness is to be held on April 7th.

In the first section of his paper Dr. HUGHLINGS JACKSON enumerated the various conditions under which optic neuritis was found. He believed that there was but one kind of optic neuritis from intracranial disease, but enlarged on the difficulty there was occasionally in deciding, during life, whether or not certain appearances in the fundus were owing to such disease or to Bright's disease. On this difficulty he submitted questions to the Society. Urging that optic neuritis might pass off under treatment leaving sight good, he asked what were the best signs by which past neuritis might be inferred when there was no obvious atrophy. He believed the changes were, in some cases, so slight that it would be scarcely possible from these alone to say there had been neuritis or any sort of swelling of the discs. In illustration of this he instanced a case he had recorded in THE LANCET, June 12th, 1880. He also asked if changes so slight as were left in that case were distinguishable from relics of slight changes in the discs induced in some hypermetropes by over-work of the eyes. In the next place he spoke of the rarity of uniocular neuritis in physicians' practice, especially in cases of tumour of the brain, proved post-mortem. Speaking of optic neuritis with good vision, he asked if, as some asserted, the neuritis here differed in kind from that found when sight was defective. He believed the difference was in the stage of changes; that in most, if not in all, cases of neuritis there was a pre-amaurotic stage, and that sight failed in the much later stage when the changes were clearing up. He drew particular attention to sudden temporary failures of sight in those cases of neuritis in which vision was usually good, asking what was the significance of those phenomena. Later in the paper he adduced them as evidence in favour of the vaso-motor hypothesis as to the production of optic neuritis by intracranial tumour. He spoke next of rapid permanent failure of sight in those cases of neuritis where heretofore sight had been good, one point of importance in regard to them being that the rapid failure might be erroneously attributed by the patients to remedies used or to atropine, or to ophthalmoscopical examinations. The next section was on the association of symptoms, excluding cases of tubercular meningitis. The first remark was that good general health goes practically for little in our estimation of the gravity of the situation in many cases of optic neuritis, even when sight

is good. We all see, he said, healthy-looking, robust children, and adults, who have double optic neuritis with good sight, who are sometimes supposed by those who do not use the ophthalmoscope to have no intracranial disease at all, and who, nevertheless, have intracranial tumour; sometimes death occurs rapidly. Symptoms, in the usual sense of the word, might almost be said to divide themselves into two groups—localising and non-localising. He first spoke of the non-localising, or, as they might for other purposes be called, signs, the best signs at least, of local gross organic disease within the cranium. In most cases optic neuritis goes with headache, and often with vomiting. Sometimes the headache precedes the neuritis, and what is a very different statement, it very often indeed precedes failure of vision. The three symptoms point to local gross organic disease within the cranium, but are no further localising; they do not help us to determine in what particular part that disease is. The headache is usually intense; often it is paroxysmal, the patient being in the intervals apparently quite well. The vomiting is purposeless, and bile is often brought up. Hence the very frequent, almost invariable, diagnosis in the early stages of chronic cases of cerebral tumour (when sight is good or only slightly defective) from liver derangement, and in acute cases the diagnosis of "bilious or gastric fever." Or the patient, if a woman, is sometimes supposed to be only hysterical, until some unmistakable intracranial symptom, such as convulsion, suddenly alters the diagnosis; not unfrequently the patient, supposed to have a slight ailment, dies rapidly, or even suddenly. The routine use of the ophthalmoscope would save us from most of these errors in diagnosis. There is sometimes an acute illness as our first evidence of tumour. But there are degrees from such an illness to great chronicity. It is very important to bear in mind that optic neuritis occasionally occurs without any headache and without vomiting, and that the headache may be slight and the vomiting little. Another way of putting what had been said was to say that there were all grades of severity of the ailment, of which optic neuritis forms one part, from a condition which (when sight is good, as it often is) is mistaken for digestive derangement, or for hypochondriasis, or for hysteria, up to a condition like that of tubercular meningitis. At this juncture cases after neuritis has passed off, leaving or not leaving optic atrophy were spoken of. Suppose that there had been an acute illness from which the patient had recovered, except, perhaps, for defective sight, with some atrophy of his optic discs, there comes the question, Was the acute illness meningitis? For his (Dr. Hughlings Jackson's) part he believed it to be very much more probable that it was and remained a case of local gross organic disease. It is of no avail to say that the patient had "all the symptoms of a meningitis," for there are no symptoms known to be characteristic of meningitis only. Admitting that during the illness we might be unable to decide, he would take the mere fact of recovery as strong evidence against meningitis—not that he denied that recovery from meningitis occasionally happens. Autopsies alone could decide. So far as autopsies showed (held some time after recovery on return of head symptoms, or after death by some other cause) the evidence was strongly in favour of local gross organic disease rather than of meningitis, in the kind of cases referred to. From any or the whole of the three symptoms occurring acutely or chronically we cannot be certain of tumour, but in a chronic case we are in most cases right in predicting it. Suppose we were to feel certain of the existence of tumour, we should have, from the symptoms mentioned, so far as he knew, not a particle of evidence as to the locality of the tumour beyond that it was intracranial. Of course, if the pain be persistently one-sided, it is then a localising symptom. He then spoke of symptomatic conditions under which optic neuritis was rarely or never found. It was scarcely ever, if ever, found with ordinary epilepsy—the epilepsy of nosologists. It was very common with epileptiform seizures—convulsions beginning deliberately in some part of one side of the body. There were, however, a few cases of gross organic cerebral disease in which there are paroxysms like those of epilepsy proper, and occurring as in cases of epilepsy proper at intervals, health being good betwixt. If double optic neuritis be found in a case which symptomatically is like epilepsy proper, he would surmise that there was gross local organic disease. He had never seen optic neuritis in chorea. It was particularly to be remarked that optic neuritis was rare with complete persistent aphasia; not very uncommon with slight aphasia, nor with temporary complete aphasia, nor after right-side-beginning epileptiform seizures. The reason he supposed was that complete persistent aphasia often depends on clot or softening. On the other hand, tumour, the common cause of optic neuritis, was a very rare cause of complete aphasia. It was rare to see optic neuritis associated with extreme positive mental symptoms. In two cases he had seen the patients so affected became maniacal; in neither was there any local gross organic disease discovered post-mortem. Optic neuritis, although so often found with disease of the cerebrum or cerebellum, did not occur from mere destruction of any particular part of the encephalon. We are, the author said, not now concerned with defect of sight, but with the process of production of optic neuritis, with which there may or may not be defect of sight. Optic neuritis mostly occurs with intracranial tumour or some other adventitious product. The tumour may be in any part of the encephalon, anterior, middle or posterior lobe of cerebrum, pons Varolii, cerebellum (middle lobe, or right or left lobe); it may be at the base. Next, optic neuritis may not be found with tumours of different parts of the cerebrum. It may not be found with adventitious products in the cerebellum. A further fact in accordance is that optic neuritis may occur late in cases of cerebral tumour, this is, of course, in one way an important qualification of the last-made remark, but does not invalidate it; on the contrary, enforces the general statement that optic neuritis is not caused by mere local destruction of any part of the nervous centres. Optic neuritis exceedingly rarely occurs in cases of extensive destruction of brain by softening or clot (hence it is rare with complete aphasia and ordinary hemiplegia). Softening and clot affect a particular locality; and it might be said that in this is one reason for there being no optic neuritis. But it is sometimes found with tumour in this region. So then, because optic neuritis occurs with tumour of any part, and may not occur with tumour of many parts, because it comes on late in some cases, and because it is very rarely found with such widely destructive processes as softening and clot, it was inferred that it does not depend on local destruction of any part of the nervous centres. Optic neuritis points to the general nature of the local disease, but not to its particular nature. It is mostly produced in cases of gross local organic disease, but that disease may be not only tumour ordinarily so called or syphiloma, but cyst or abscess—may be an adventitious product of almost any fluid. We may safely make the generalisation that it points, most often, to a "foreign body" of some kind—of almost any kind. If a magician were to introduce a lump of wood into any part of a man's encephalon, it might, the author believes, produce double optic neuritis like that produced by a "foreign body" of pathological origin. There is no difference in the optic neuritis produced by tumour of any kind, by abscess or cyst. Tumour, or any other adventitious product, does not produce optic neuritis in its particular character as this or that kind of pathological product, but in its general character as "a foreign body;" and then, not because it destroys, but by some indirect action. Further evidence in support of this doctrine is that optic neuritis may exist when sight is good. And with or without defect of sight optic neuritis may pass off when the central disease remains. The several different lines of evidence agree in converging to the conclusion that optic neuritis results secondarily from a "foreign body." The hypothesis of Von Græfe, Schmidt, and the vaso-motor hypothesis commonly attributed to Benedict, as to the mode of production of optic neuritis by internal disease, were then considered. Dr. Hughlings-Jackson thought the last mentioned hypothesis was the one least open to objection. The importance of microscopical evidence was urged, but was not spoken of by the author, as he had no work of his own of the kind to bring forward, and because, he said, others present were more competent to speak on that part of the subject than he was. He concluded by speaking of treatment. He urged prompt treatment of optic neuritis, with obvious exceptions, by iodide of potassium and mercury. He spoke strongly of the importance of the routine use of the ophthalmoscope in nervous diseases, since in that way the pre-amaurotic stage, the stage most amenable to treatment, would often be discovered. He believed there would be fewer blind people if the ophthalmoscope were used more frequently by routine in nervous affections, and treatment were begun before sight began to fail.

Reviews and Notices of Books.

The Brain as an Organ of Mind. By H. CHARLTON BASTIAN, M.D., F.R.S. London: C. Kegan Paul and Co. 1880. (International Scientific Series, Vol. XXIX.)

THE importance of comparative physiology in the study of the functions of the brain needs no vindication. Most modern discoveries regarding cerebral action depend upon it for their evidence or confirmation. The present time is opportune for the appearance of a work which has for its object the elucidation of the functions of the brain by the study of those functions throughout the animal kingdom. The past work of Dr. Bastian qualifies him well for the task. Besides his contributions to cerebral pathology, he has done good work at comparative anatomy, having won his scientific spurs over the nematoid worms before he undertook the researches on the "beginnings of life" with which his name is chiefly associated.

The book opens with a chapter on the "uses and origin of a nervous system" in the lowest animals, in which vital irritability precedes those differentiated manifestations of action which are immediately succeeded, in the progressive scale of organisms, by the presence of recognisable nerve elements. Here, of necessity, the speculations of Herbert Spencer and the observations of Romanes are chiefly followed. A description of the elements of a nervous system, fibres, cells, and ganglia, and of the nature and use of sense organs, follows. The nervous systems of molluscs, vermes, arthropods, fishes, amphibia, reptiles, and birds are then successively described, clearly and well, but with the subject of these chapters all students of comparative anatomy are familiar.

Probably some wonder has been excited by the introduction of the indefinite article in the title of Dr. Bastian's book. Why speak of the brain as *an* organ of mind? The answer to this will in part be found in the tenth chapter on the "scope of mind." Rejecting as absurd the old idea of a "metaphysical entity" using the brain as its organ, he finds the common notion of what should be included under the term "mind" altogether erroneous, and to be at once given up. Mind is not to be limited to the domain of consciousness, but should include "the functional results of all nerve actions on the side of ingoing currents and in the nerve-centres—whether these nerve actions are accompanied by a recognisable conscious phasis or whether they form what appear to be mere physical links between other nerve actions which are unquestionably in relation with definite conscious states." In the title, then, the word organ is used "merely in the sense that it is a part whose molecular changes and activities constitute the essential correlatives of those phases of consciousness known as sensations, emotions, thoughts, and volitions, as well as of a considerable part of the sum total of those other nerve actions which are unattended by consciousness." Thus mind, in the sense in which the word is often used, has to Dr. Bastian no existence; and the subject of the book, "The Brain as an Organ of Mind," is in effect the study of mind as the product of the action of nerve tissue.

Reflex action and unconscious cognition, sensation, ideation, and perception are next discussed, chiefly on the basis of the writings of Hartley, Sir William Hamilton, and Herbert Spencer, and the way is thus cleared for chapters on consciousness in the lower animals, on the nature and origin of instinct, on nascent reason, emotion, imagination, and volition, which are full of interesting facts, carefully culled from the writings of Buffon, Darwin, Spalding, Lubbock, and others, as well as from that repertorium of anecdotes—the pages of *Nature*. The anatomy of the brain of quadrupeds and the quadrumana is then described with much clearness and conciseness, rendered the more intelligible by many excellent illustrations.

The study of the human brain is introduced by a description of its development, followed by an account of the chief facts known regarding its size and weight, those collected by Thurnam being given with some important additions, especially relating to the connexion between brain-weight and mental power. The general relation between the two is subject to many exceptions. The heaviest human brain (67 oz.) as yet on record belonged to a man who could neither read nor write, but of twenty-three brain-weights of distinguished men all but six are above the average. That of Cuvier, as is well known, heads the list, although no less than four ounces less than the brain just mentioned. The brain of Professor De Morgan was only slightly above the average, those of Grote and Whewell were merely average weights, while that of Hughes Bennett, as well as of Tiedemann, were below the average. But, on the other hand, of eleven adult male Chinese coolies, whose brains were weighed by Dr. Clapham, in only two was the brain-weight below the average, and the mean weight of the whole was two ounces above the average—a remarkable fact, which Dr. Bastian explains as the result of a very long-continued antecedent civilisation, even of a low order.

The external configuration and internal structure of the human brain are then lucidly described, no less than one hundred pages being devoted to the description. In the latter the researches of Broadbent are chiefly followed. An outline is then given of the functional relations of the principal parts of the brain, according to the teaching of anatomy, experiment, and pathology. An attempt is made to explain the cross relation between the cerebral hemispheres and the opposite half of the body, which is not, however, very successful, the conclusion being that the cross relation was initiated in fishes in some "quasi-accidental manner, and that, in the first stage of its existence, it was, and still is, represented only by the decussation of the optic tracts; that in higher animals possessed of well-formed limbs, reflex and volitional movements of those of one side are often evoked in response to unilateral stimulation, so that in such creatures there would be a distinct advantage if other sensory channels, by decussating, were to be brought into relation at their central termini with those of the visual sense, and, finally, the same influences, whatever they may be, which determine this additional sensory decussation would lead to the establishment of the equally necessary sequential decussation of the motor channels for the limbs." In reference to this statement it should be pointed out that Dr. Bastian holds the view, which we thought had been effectually disproved, that the decussation of the optic nerves in man is complete. The difficult question of the functional relations of the cerebral hemisphere with one another, the duality of body, and the unity of mind, is then discussed. An interesting case is quoted from Dr. Strumpell in which there was general anæsthesia, loss of taste and smell, of the sight of the left eye, and deafness of the right ear, and in which the patient could at any time be sent to sleep by bandaging the right eye and closing the left ear. This is regarded as constituting proof of the activity of the sensorial regions of the hemispheres "for the production of what we know as consciousness." The fact that mental operations are unimpaired, and consciousness unaffected, although there is complete hemianæsthesia of the general and special sensations, is explained by the commissural function of the corpus callosum, by which both hemispheres are brought into relation with the sensorial stimuli from one half of the body, although it is admitted that the effect is "difficult to understand." The evidence of the possibility of a separate or dissimilar, but simultaneous, activity of the two hemi-

spheres is of a very doubtful nature. It is held, however, that the intellectual powers are very much lessened by extensive disease of one hemisphere, although to this there are some striking exceptions. While "will," like "intellect," is single, we are, in its exercise, brought to the turning point where mental gradually give place to non-mental phenomena. The "out-going currents," which are thus set up have, it is held, no conscious side whatever, and "lie as much outside the sphere of mind as the molecular changes in the muscle which these out-going currents" evoke. It should be remembered, however, that this view, strongly held by Dr. Bastian, is opposed by some facts which have led very acute thinkers to entertain a different view. The cerebellum is regarded as a supreme motor centre for reinforcing and for helping to regulate the distribution of outgoing currents in voluntary and automatic actions. This view is based upon *à priori* reasoning from anatomical facts, and is not very easy to reconcile with many of the facts of experiment and pathology.

An interesting chapter deals with "Phrenology, old and new," and in this the modern discoveries in cerebral localisation are contrasted with the earlier views, of which a good historical sketch is given from Prochaska. The will and voluntary movements are next discussed. The mental processes concerned in volition are analysed, and their relation to the different parts of the nervous system, and the mutual relations of voluntary and automatic movements, are considered. One of the least satisfactory sections of the book is that in which an attempt is made to interpret the well-known experiments of Ferrier and Hitzig by the untenable hypothesis that the fronto-parietal centres are "rather sensory than motor." Dr. Bastian's views on this, and on the subject of the "cerebral mental substrata," appear to have been largely determined by his theories on the cerebral relations of thought and speech which are developed in the last chapters. He differs from most authorities on the subject in associating these almost exclusively with auditory processes, and this appears to have led him to assign to the sensory process the predominant, and indeed sole, part in the mechanism of thought—a view which is altogether opposed to the theories of such authorities as Wundt, Bain, and Hughlings Jackson.

The final chapter deals with certain further problems in regard to the localisation of the higher cerebral functions, especially in relation to the function of speech; and in an appendix is summed up the evidence in regard to the non-existence of any "muscular sense."

Dr. Bastian deserves much praise for the industry with which he has collected from various sources the materials which he has employed throughout the work. It bears the stamp of his own strong convictions. Although his views on some of the vexed questions of cerebral physiology will probably not receive general assent, the problems are everywhere discussed with conspicuous ability and untiring energy. The illustrations are throughout abundant and good.

Atlas of Histology. By E. KLEIN and E. NOBLE SMITH. Part XIII. 1880.

THIS part concludes the volume. It contains drawings illustrating the outer and middle ear, the internal ear, the nasal mucous membrane, the spleen, and the ductless glands, including the hypophysis cerebri, the thyroid gland, the supra-renal body, and the glandulæ coccygea and carotica. The last chapter is devoted to the indirect division of the nucleus of the epithelial cell, and gives a detailed account of the process of cell division as observed in epithelial cells—a subject on which many essays have been recently written, and to which Dr. Klein has himself devoted much attention. The illustrations of this part are good.

When the first part of this work was published the need of a good Atlas of Histology was very great, and now that it is completed we think it fulfils the anticipations that were formed of it. The absolute number of plates is forty-eight, each plate having from eight to ten figures; and the text runs to 448 pages. No part of the body is omitted. A large portion of the illustrations and nearly the whole of the text are original, though some of the former are borrowed, with acknowledgment, from the best and most recent sources. Some appear to have been drawn by Dr. Klein's pupils from sections made under his supervision; and all may be regarded, from his known skill as a teacher, as representing the tissues as seen with the best microscopes, and with the most recent improvements in staining or injection.

The chief, perhaps the only fault of the work is in the somewhat loose and careless style of the letterpress. Dr. Klein both speaks and writes English well, indeed excellently for a foreigner; nor does he ever fail to make himself understood; but many of the sentences might with advantage have been revised or rewritten—a duty that might naturally have been expected to fall on his coadjutor.

The weakly illustrated parts of the work are those of the nervous and muscular systems, the latter in particular being in no way so far in advance of the drawings given by Mr. Bowman forty years ago as might have been anticipated from the recent technical improvements that have been made. The mucous and serous membranes, lymphatics, hair, and many other organs, are, on the contrary, very well drawn. With this book and the introduction to Quain's Anatomy by his side, the student or practitioner will learn all that has been recently done and all that he needs to know, unless he is himself making original observations on histology.

The Medical Register, 1881. London: For the General Medical Council, at Her Majesty's Printing Office, and published and sold for the Council by Spottiswoode and Co., 30, Parliament-street, S.W.

Proceedings of the General Medical Council and of the Executive and Dental Committees in regard to the Registration of Dentists from January 8th, 1879, to February 3rd, 1881. London: Spottiswoode & Co.

THE Medical Register of 1881 has been brought out much more promptly than its predecessors. It contains the register of 22,936 practitioners holding qualifications from the bodies named in Schedule A of the Act of 1858. This number exceeds that of the preceding year by 420. But it would be unsafe to assume that there was this difference in the number of persons practising. The number in the Register varies a good deal from year to year, according to the numbers removed under Section 14 of the Medical Act, which empowers the Registrar to send a letter to any medical man inquiring whether he has changed his address, and in the event of receiving no reply within six months to erase the name. Other names are removed on the score of death or by ceasing to practise. But it will readily be seen that under these heads great vagueness and variety of results may appear from year to year, giving only an approximation to the facts. Thus in 1876 there were 517 removed from the Register; in 1877 837; in 1878 1310; in 1879 1109; in 1880 841. A variable number of persons are restored annually to the Register under the same section. Evidence of death was ascertained in 1879 in 548 cases; in 1880 only in 526. The volume contains all the various Medical Acts of Parliament, with an index or page of contents, under which useful abstracts of the different Acts are given; the accounts of the General Medical Council presented to Parliament, the Dentists Act, and the accounts connected with its administration, &c., with various tables of great interest.

The volume bears evidence of careful editing, and, though

not absolutely free from errors, is probably more so than any of its predecessors.

Another of the publications of the General Medical Council is before us—a small volume containing a Record of the Proceedings of the General Medical Council and of the Executive and Dental Committees in regard to the Registration of Dentists, down to those of the recent meeting. To those interested in this most unsatisfactory part of the Council's work this volume will be found useful.

ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council of the Royal College of Surgeons, held on the 10th inst., the Committee on Preliminary Examinations presented its final report, dated January 31st, 1881, on the series of inquiries contained in Dr. Haldane's communication of November 11th, 1880, with respect to the desirability of candidates for the medical profession being required, before they enter on the purely medical curriculum, to have been instructed and examined in the rudiments of Natural Science—Physical, Chemical, and Biological.

The Committee have considered seriatim the five questions proposed in Dr. Haldane's letter—viz., (1) What amount of knowledge of the rudiments of Natural Science might be fairly required from intending candidates for the medical profession? (2) Should candidates, before being admitted to examination, be required to adduce evidence of having been specially instructed in Natural Science; or should proficiency as ascertained by examination be considered sufficient? (3) At what period should the Preliminary Scientific Examination be passed? Should it take place before the commencement of the purely medical curriculum, or before the end of the first year thereof? (4) If a candidate have taken up a department of Natural Science as an optional subject at the Preliminary General Examination, should the fact of his having passed in it satisfactorily exempt him from appearing for examination in the same subject at the Preliminary Scientific Examination? (5) In the case of candidates who have passed the Preliminary Scientific Examination, what modifications could be made in the present medical curriculum and present Professional Examinations?

They recommend to the Council that the following answer should be returned to Questions 1, 3, 4, and 5—viz., That, in the opinion of the Council, it is desirable that intending medical students should be encouraged to study in one or more of the branches of natural science which are not included in the compulsory subjects of the Preliminary Examination required by the General Medical Council, and that a student who shall have passed an examination in one or more of such subjects should be exempted from any attendance on lectures [on the subject or subjects in which he shall have passed] and from similar examinations on those subjects during his professional education, but that such exemption should not include the practical instruction and examinations now required by any of the several medical authorities. And that to Question 2 the following answer should be returned—viz., That in the opinion of the Council, proficiency as ascertained by examination should be deemed sufficient.

The report was approved, adopted, and entered on the Minutes.

Mr. Gay moved, That in the opinion of this Council it is desirable that lectures delivered in the theatre of the College should conform, as far as may be practicable, to the terms and conditions of the trust in relation to the strictly Hunterian Lectures on Comparative Anatomy and other subjects as defined in that trust; and that they should, therefore, relate for the most part to such subjects as admit of illustration by the preparations in the museum. And that the President and Vice-Presidents, in regulating (as provided by the standing rule) the details of the proceedings relating to the lectures, be requested to communicate to the several professors and lecturers from time to time appointed the foregoing resolution of the Council. This motion was, for some unaccountable reason, not seconded, and fell through.

It was further resolved that a conversazione should be given by the College to the members of the International Medical Congress, to be held in London next August.

Analytical Records.

MEDICATED THROAT PASTILES.

(ALLEN & HANBURYS, PLOUGH-COURT.)

THESE pastiles contain convenient doses of well-known remedies, such as morphia, ipecacuanha, aconite, chlorate of potash, and citrate of iron, in a soluble gelatinous basis. They are well adapted for sensitive patients, and, indeed, as "elegant preparations" leave nothing to be desired.

SYRUPUS TONICUS (GALE'S).

(GALE & CO., BOUVERIE-STREET.)

A pleasant and convenient syrup, with but little inky taste. Each drachm is said to contain 1 grain of amorphous quinine, 1 grain of iron, and 1-32nd of a grain of strychnine. It has, therefore, the composition usually assigned to Easton's syrup, and has the advantage of being very much cheaper.

PREPARATIONS OF "THE PURE FOOD COMPANY."

(THE FOOD LABORATORY, 4, PRINCES-STREET, RED LION-SQUARE, LONDON.)

The following samples from the above Company have been sent to us:—

1. Milk food for infants.
2. Essence of beef, or pure beef-tea.
3. Solidified albuminous beef-tea.
4. Extract of coffee.

All the samples are of good quality, but they do not appear to possess any particular novelty.

TRIPOLITH.

(KROHNE & SESEMANN, DUKE-STREET, MANCHESTER-SQUARE.)

A slate-coloured powder, recently introduced from Germany as a substitute for plaster-of-Paris for fixative dressings. Gauze bandages filled with the powder are immersed in water and applied in the usual manner to the limb, which has previously been wrapped in a flannel bandage. A thin mixture of the powder with water is then applied to the gauze, and in five minutes the whole is hard. The powder is very light, does not appear to change much in the air, and sets very quickly. It seems, therefore, to be in all respects an improvement on common plaster, and it is said to be quite as cheap.

ÆSCULAP BITTER WATER OF HUNGARY.

(ÆSCULAP BITTER WATER COMPANY, SNOW HILL.)

The activity of this powerful mineral water depends mainly on the large quantity of the sulphates of sodium and magnesium it contains. It has been found to be a very efficacious aperient, and appears to act more rapidly than some others with which it has been compared.

THE SEAMEN'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—Is there any truth in the rumour that the Committee of the Seamen's Hospital have elected as their visiting surgeon a gentleman who is a local practitioner, in preference to other candidates who are connected with various London Hospitals, and that this gentleman is over forty years of age; notwithstanding that the committee in their advertisement fixed that limit to the age of applicants? Can there be any special reason for this peculiar action, when there is a resident surgeon, a Fellow of the Royal College of Surgeons of many years' standing, at the hospital, and the chief duty of the visiting surgeon is to aid and consult with that gentleman in cases of operative interference and severe emergency? If true, it would be a curious proceeding, as the "non-local character of the charity" is always laid particular stress on when appealing to the notice and pockets of the charitable public.—Yours &c.,

March 12th, 1881. A SURGEON.

THE LANCET.

LONDON: SATURDAY, MARCH 19, 1881.

MR. DODSON was not prepared to answer the question put to him by Mr. J. TALBOT in the House of Commons on the 14th inst., to the effect whether he was in a position to secure to the inhabitants of the metropolis the advantages which were intended to be conferred by the establishment of hospitals for fever and small-pox, under the provisions of the Metropolis Poor Act, 1867. Indeed, it would have been wonderful if he had been, having regard to the complicated nature of the subject as it now stands, at least in regard to small-pox. It would appear, moreover, from Mr. DODSON'S reply to Mr. TALBOT, that another appeal, touching, as we infer, the essence of the matter in relation to the Hampstead Hospital—namely, that it was necessarily a nuisance as assumed in the appeal on the legal question just determined by the House of Lords—is still open to the Managers of the Asylums Board. It is scarcely conceivable that the Asylums Board will avail themselves of this opportunity for further legal contention, but they have a month for consideration as to the course they will take, and it is possible that within the time they may persuade themselves that it is due to their public position, and the law under which they act, to leave no legal stone unturned. A deputation of the Asylums Board had an interview with Mr. DODSON on Saturday last, but reporters were not present. This interview was the first, we believe, after the decision on the appeal to the House of Lords, and it must be admitted that even in public offices there may be griefs too sacred to be bared to the public eye.

Although the decision on the first appeal to the House of Lords in the Hampstead Hospital case more immediately affects the metropolis in respect to hospital accommodation for the sick of small-pox, in reality it must be regarded as touching the subject throughout the kingdom. Every phase in the history of the Asylums Board and of the Local Government Board in its relations with it since the former Board had thrust upon it quasi-sanitary functions in its hospital administration has, as we now see, tended to make more and more clear the disadvantages arising from the administration of the metropolis in sanitary matters being dissevered from the laws governing the general sanitary administration of the kingdom. It has equally illustrated cardinal defects in the law as regards the provision of sanitary hospitals, whether as concerns the metropolis particularly or the kingdom at large. It is obvious that a law which gives authorities the power of erecting and maintaining hospitals for infectious diseases, whether for Poor-law or sanitary purposes, should also provide for the acquisition of land for sites for such hospitals after due public inquiry. It is, perhaps, correct to say that the want of such provision has been the greatest obstacle to the proper provision of hospital accommodation throughout the kingdom, and that it underlies much of the difficulty which the Metropolitan Asylums Board had to encounter, and contributed greatly to the disasters now befalling its hospital administration. But much as this defect in the fundamental law may have aided to bring about the present crisis in public hospital matters, it must probably be reckoned second in place to the fact that in the metropolis the execution of one of the most important public duties, in face of spreading epidemic diseases, should have been transferred from the sanitary authorities, who alone have the powers necessary to deal fully with these diseases, to a poor-law authority without any corresponding powers of combating them. This is the more remarkable as the Local Government Board, with whom the responsibility for this course rests, have been devoting themselves to a directly opposite policy of hospital administration in the provinces. There they have set their face against extensions of poor-law infectious disease hospitals, and have adopted the policy of urging sanitary authorities to provide such hospitals, as well for the reception of pauper as of non-pauper patients. Of the justness of this policy there can be no question. It regards the *disease* in its public health relations as the subject to be dealt with primarily and essentially, not the social status of the patient. A policy of this sort, joined with the requirements that the sanitary authorities *shall* (not *may*) provide hospitals and have the power to acquire compulsorily land for them, would best meet the public health necessities of the case; and the history of the Hampstead case taken in connexion with what is now occurring in relation to the Fulham and Homerton Hospitals, must make it abundantly clear that the metropolis will not get out of the hospital bog in which it is now floundering unless a similar policy is applied to it.

Great as the financial and administrative difficulties may be in the metropolis in dealing with this hospital question—difficulties before which both Mr. STANSFELD and Mr. SCLATER-BOOTH quailed, and in so quailing have left a crown of statesmanship within reach of Mr. DODSON, if he is disposed to seize upon it,—we do not believe that these difficulties are insuperable, and it ought to be possible to assimilate the management of sanitary hospitals in the metropolis to that which is being introduced generally in the country.

It is an important consideration that the present excitement against the Metropolitan Asylums Board hospitals is not against hospitals of this sort *per se*. It is rather against *big* hospitals as against *smaller* hospitals. This has been shown remarkably in recent letters to the public press from the pens of gentlemen who have been most forward in attacking the existing hospitals. This question must be considered separately, but it must be confessed that it opens out a line of thought which promises escape from present difficulties. It has been too hastily assumed that if what is asserted of the big hospitals be true it must be true also of smaller hospitals; but this by no means follows. For example, in the matter of incidental transmission of infection alone, from the visits of people from infected neighbourhoods to the hospital to inquire as to friends or relatives and patients therein, the chances of such transmission would be much greater in the vicinity of a big hospital than a smaller one. Nothing has yet occurred to make us doubt the wisdom of the Legislature in giving powers for the provision of hospitals by sanitary authorities in the Sanitary

Act of 1866, and that the policy of that Act in regard to hospital provision should not be maintained. It cannot be denied, however, that in regard to small-pox, the public excitement with respect to the provision of small-pox hospitals is getting perilously near a point which will make the establishment of such hospitals, whether large or small, impossible. However much this is to be regretted, it would be folly to deny the fact, and that there are not wanting good grounds for belief that the present small-pox hospitals are a danger to their immediate neighbourhoods. The possibility, then, of such a state of popular feeling as would render the establishment of such hospitals practically impossible, must be looked frankly in the face. It is a possibility which might for the moment be regarded with feelings of dismay by those who know best the habits of small-pox when retained in private houses, particularly among the poor. But in the end (and this may be said without the slightest degree of cynicism), it could not but prove advantageous to the public at large. After all, hospitals for small-pox are provisions against a contingency which should never occur among the inhabitants of these islands. With vaccination and revaccination at our command, *without cost*, if needs be, everyone may secure an almost absolute security against the disease. This security is practically now given to young children by the working of our public vaccination arrangements, and such children are being rapidly eliminated from the victims of small-pox. In the case of older children and young people who have come to years of discretion the choice of revaccination rests with themselves. Our small-pox hospital provision, for the most part, represents an expenditure out of the rates for saving these people from the results of their own carelessness or apathy. It may be a Christian policy to do this, but is it an economical or a prescient one? We commend the consideration to Mr. DODSON and the present Government.

ALBUMINURIA without structural disease of the kidneys—a symptom of considerable interest and of much practical importance—was the subject of a recent communication by Professor BAMBERGER to the Vienna Gesellschaft der Aerzte. "Temporary albuminuria" it is often termed, but he suggests that "hæmatogenic" would be a more accurate term as contrasted with "nephrogenic," due to organic renal disease. This functional albuminuria is often trifling in amount, causing merely opalescence of the urine under the ordinary reagents, but the amount of albumen is sometimes considerable. It may occur in individuals apparently in perfect health, as ULTZMANN and LEUBE showed, and their observations have since been amply corroborated. It occurs also in febrile conditions, apparently as a result of the blood state, although standing in no direct relation to the pyrexia. Passive congestion and epileptic attacks also cause it. It is found in the convulsions from strychnine poisoning, but never in the abundant watery urine of hysterical states.

What is the origin of this albuminuria? An answer can be best given to this question by asking another. Why is not albumen always present in the urine, since all capillary vessels allow albumen to pass through their walls, and it would be remarkable if those of the kidney were any exception to the rule. WITTICH put forward the theory that the urine which passes through the capillaries of the Malpighian bodies is always albuminous, but that its albumen only serves to nourish the epithelial cells of the urinary tubules, and that the albumen which is not thus used passes back into the circulation. This theory presents the difficulty that it assumes that the epithelium of the kidney is nourished in a different way from all other epithelium, but it has the support of the pathological fact that when the epithelium is removed from the kidney, albuminuria occurs. And yet, on the other hand, intense fatty degeneration of these cells may exist, as, for instance, in phosphorous poisoning, and no albumen may appear in the urine; while in cases of transient albuminuria, in which, for instance, albumen appears in the urine after an epileptic fit, it is not conceivable that this explanation will suffice. RÖSNER has brought forward an experimental objection to WITTICH'S theory. He placed small fragments of fresh kidney in boiling water, and thus fixed the albumen in the position in which it was produced. In diseased kidneys he found coagulated albumen in the urinary tubules, but he never found it there in healthy organs.

Physiologists assert that albumen is retained in the kidneys on account of the pressure-conditions of the circulation; the pressure is sufficient to lead to the transudation of water and saline substances, but not of albumen. It may be asked, however, How does the pressure here differ from that in other capillary vessels? The size of the renal arteries in proportion to the organ, the structure and arrangement of the capillaries, all point to a high blood-pressure in the kidneys, a condition in which substances only slightly filtrable should readily pass through, albumen among them. HEIDENHAIN goes further, and asserts that nothing of the nature of filtration occurs in the kidney, basing his assertion on the relation which the amount of urea bears to the quantity of urine.

Another explanation which has been given is that the epithelial covering of the smallest renal capillaries keeps back the albumen. Mucous membranes only allow the escape of an albuminous fluid when they are denuded of their epithelium. This theory, however, holds good only for the living kidney; albumen passes out of the kidney after death in spite of the epithelium. Moreover, the epithelium is not equally retentive of all varieties of albumen; egg-albumen, for instance, injected into the vessels rapidly passes out in the urine; serum-albumen does not, while the albumen of red-blood corpuscles, the hæmoglobin, rapidly passes out in the urine if the corpuscles are destroyed.

RUNEBERG has asserted that the amount of albumen which passes through animal membranes varies inversely as the pressure; the lower the pressure the greater the amount of albumen. Hence he believes that when albuminuria is not dependent on structural alterations in the kidneys, it is to be ascribed to the diminution of pressure in the Malpighian glomeruli. He thus accounts for the albuminuria of mechanical congestion of the kidney, in which the blood-pressure in the aortic system is commonly much lowered. The diminished quantity of urine in this condition supports this theory, and also the beneficial influence of digitalis as a remedy for the condition. Febrile albuminuria he ascribes to the same mechanism, the lowered blood-pressure from the

enfeebled state of the heart. He has not, however, sufficiently distinguished the influence of the two important factors in the circulation, the pressure and the rapidity of the movement of the blood. In order to ascertain afresh the influence of the first of these factors, BAMBERGER has performed the experiment of stretching two similar membranes (amnion or pericardium) over cylinders, and allowing equal quantities of albuminous fluid to filter through them, with and without the pressure of a layer of oil poured upon the top. In the first experiment he took some pleuritic fluid, which contained 1·174 albumen. He found that in the cylinder in which the pressure was the greater, the absolute quantity filtered and the absolute amount of albumen were greater, but that in both instances the percentage of albumen in the total filtrate was the same. A second experiment with ascitic fluid, containing a large amount of albumen gave similar results. Quite recently GOTTSCHALL and HOPPE-SEYLER have performed similar experiments, and have obtained the same results. RUNEBERG'S theory thus also becomes untenable, and there are other experimental objections to it. When the renal arteries are tied the blood-pressure falls considerably, but the kidneys become congested, and blood and albumen at once appear in the urine. Moreover, in febrile states, the albumen often appears a few days after the commencement of the pyrexia, and while the pulse is still full and bounding. Neither an increase nor a diminution of the blood-pressure will alone account for the transudation of albumen. The only other condition to which it can be referred is the retardation of the blood-current. Albumen is slowly filtrable, and may only pass through when it remains for a comparatively long time in contact with the wall of the vessel. The same relation is seen in inflammation, in which first there is a retardation of the blood current, and then the exudation of an albuminous fluid. This, however, is probably not the only factor. The epithelial cells of the Malpighian glomeruli may lose their function without presenting any anatomical alterations—a hypothesis which can be neither established nor disproved. Another factor is the vaso-motor action, consisting in either paralysis of the vaso-constrictors or irritation of the vaso-dilators. By dilatation of the vessels a retardation of the blood current can readily be produced. In this way the origin of the febrile albuminuria can be readily understood, since vaso-motor disturbances are frequent in that condition, apart from any direct relation to the amount of pyrexia. If the whole nervous system, and therefore also the vaso-motor system of the kidneys, is deranged by an epileptic attack, albuminuria may readily arise in the same way. The same explanation—the hypothesis of a slight vaso-motor disturbance—affords also the most ready explanation of the occasional albuminuria of apparently healthy individuals. At the same time, the possibility of chemical changes in the circulating albumen must not be forgotten. Under some conditions albumen is probably formed which behaves in the same manner as egg-albumen or paraglobulin, and, unlike serum-albumen, filters easily, and may thus appear in the urine. This fact, indeed, renders it doubtful whether the phenomena are to be explained at all by the mere physical conditions. We know nothing of the reason why the different kinds of albumen are excreted with various degrees of readiness, and whatever condition is the cause of this difference may also, when deranged, be the source of the temporary albuminuria which still constitutes so great an enigma.

IT seldom happens that the plain truth can be—or is—spoken about any subject of warm controversy until long after the heat has subsided. When the dispute issues in legislation on the lines laid down by the dominant party, there is almost sure to follow a period of more or less sententious reserve on the side of the defeated. It may be bad taste to show elation in times of success, but dominant parties habitually triumph over their vanquished opponents, and if they have been fired with anything like enthusiasm in their enterprise, and have felt that the work in hand was a worthy and useful undertaking, it is difficult to call in question their full right to take credit for the achievement. When the success gained has been less complete than the substantially victorious party reasonably expected it to be, it is natural that there should be considerable disappointment and some bitterness. Nor can there well fail to be an attempt to carry the conquest to a fuller conclusion. All this is perfectly intelligible, and in many respects as it should be. If no strong and deep feeling existed, there could be no earnestness, and in the presence of strong and deep feeling there must always be something of animosity in any contention. We are not, therefore, in the least degree surprised to find that the promoters of the attempt to arrest scientific inquiry by vivisection have formally renewed the onslaught. They took up arms in what they conceived to be the cause of humanity against inhumanity, and they succeeded in passing an Act which virtually affirmed the principle for which they contended—namely, that it was wrong to inflict suffering on the lower animals in the search for relief and remedy for the sufferings of mankind. The provisions of the new statute could not, however, at the moment be made sufficiently repressive to crush out the practice of vivisection finally and instantly. It is only natural, we concede, that the "anti-vivisectionists" should return to the charge. Since the measure of triumph achieved they have, indeed, stooped somewhat low to conquer more completely. Their mode of carrying on the agitation has been, to say the least, unscrupulous and undignified; but let that pass. It has never been our *rôle* to offer a determined opposition to the movement. The sympathies of every heart must be stirred against wanton cruelty of any kind, and in so far as it may have been proved, or even reasonably suspected, that pain *was* inflicted on the lower animals without absolute scientific necessity, our sympathies have gone out with those who tried to stay the hand of the heedless or too persistent investigator. Meanwhile we have felt, as all concerned in the pursuit of physiological science and the art of healing must feel, that without vivisection, secrets, a knowledge of which is essential to the discovery of means and ways of cure for human maladies, could never be wrung from Nature. And this persuasion has held us in a position at once unsatisfactory to ourselves and open to the reproach of not being clearly defined. The appearance of a new Bill bearing on its back the names of Sir EARDLEY WILMOT, Mr. SAMUEL MORLEY, and Mr. FIETH, and having for its specific object the *total* abolition of vivisection, supplies us with a not un-

welcome opportunity of placing our views explicitly before the profession and the public. In short, an occasion has arisen for speaking the plain truth about vivisection, and we shall not shrink from uttering it.

Vivisection is a scientific necessity; and inasmuch as it is just as idle to try to stay the progress of science as it is to oppose the rising tide on the sea shore, the attempt to suppress this particular mode of investigation cannot be ultimately successful. Notwithstanding the assertions made by men with warm and feeling hearts, it is an incontrovertible fact that nearly all we *know* of the living organism in health and disease has been learnt by vivisection, either intentionally performed or, as the phrase goes, "accidentally" accomplished. Vivisection has been practised in all ages and countries, more or less extensively. It is the analytical method applied to the study of organic life, just as the demolition of the earth's crust by the geologist's hammer is the analytical method applied to inorganic nature. The fact that the living animal feels is an untoward contingency, but it cannot qualify the major consideration. The dissection of the dead organism is tributary or complementary, and may well be made preparatory, to the dissection of the living body; but in the long-run we must find ourselves face to face with the grim truth that it is the *living* body which science requires, and sternly demands, to explore, and which sooner or later she will explore in spite of all the hindrances which sentiment and humanity may throw in her way. If vivisection is totally abolished in this country practical physiologists will have to go elsewhere. This is what has, in fact, happened since the passing of the Act limiting vivisection. The most eminent explorers are working on the Continent and in the United States, and the only effect of persecuting them in one place is that they fly to another. It is a little vain-righteous of us to put away the evil—as we think it—with one hand while we eagerly grasp all the good that comes out of it with the other. The great bulk of the information which has enabled physicians to treat diseases with new precision in recent years, and which has already led to the lengthening of many useful lives, is the outcome of vivisection. The "anti-vivisectionist" does not stop to inquire whether the gift by which he is healed in the hour of sickness, or some one dear to him is snatched from the jaws of death, has been offered to idols! He is wise in his reticence. Now that the heat of the controversy has passed away, those members of our profession who spoke unadvisably in the interests of a crusade against cruelty must perceive that they overstated the case when they declared, or admitted, that vivisection was unnecessary. It is indispensable and irrepressible. The aim to minimise the recourse to it was humane, the attempt to abolish it altogether is absurd.

The Bill before us writes its own epitaph in the 7th clause:—"This Act shall not apply to intervertebrate animals." The promoters of the measure do not dare to push their initial—and, we must be excused for saying, pretended—proposition to its obvious and logical consequences. The feeling of the invertebrate animals is not less acute in relation to their own organisms—looking to their colder blood and comparatively less sensitive nervous systems—than the feeling of the vertebrates. If no pain is to be inflicted in the interests of science we must desist from vivisection of every kind. It is a contemptible affectation of pharisaic humanity to take credit for protecting the dog while we allow the frog to be dismembered for our information and advantage. It is mean to seek ease and remedy for our ills at the expense of suffering inflicted on the animal one remove farther—as we suppose—from community in the life we are so selfishly eager to prolong. Science tells us that *all* animals feel, and that the measure of feeling is in each case proportionate to the power of endurance, so that practically the *pain* is in all instances pretty nearly equal under corresponding conditions. Hereafter it may be demonstrated that plants, too, have feeling, and then the proposition on which the anti-vivisectionists base their movement will have been carried to the extreme. This new Bill is *not* a measure for "the total abolition of vivisection," and no such provision can ever be made. It was well to impose restrictions on the practice of operating on living animals for the purpose of scientific investigation. The Act embodied an expression of public opinion—on the subject of the use of anæsthetics, and the needless recourse to vivisection for mere purposes of demonstration,—which it was useful, and therefore right, to make; but the endeavour to abolish vivisection altogether is as shortsighted as it is impracticable. If a more stringent Act on this subject were passed to-morrow, the average number of vivisections now performed would not be reduced. The legislative exploit would simply be offering a little additional incense to our national vanity. The operations denounced here would be performed elsewhere; and then, as now, we should hug the comforting sense of superior humanity, while we bid eagerly for the increased information science might gain in her "cruel" quest.

THE letters which we publish to-day on the Fellowship of the College of Surgeons of Edinburgh must, for the present, end a discussion which has been very useful, though we could wish that it had not been necessary. The subject of it has already been ventilated in Parliament, and it can scarcely now be disposed of without a great evil being remedied. One of our correspondents very naturally speaks in the tone of one aggrieved. He takes us back to a time when the Fellowship was only to be had on terms of examination, and when it was regarded as an honour and a distinction; and he is grateful for the exposure of a system by which it is virtually sold, and, so far from being an honour, is rather the reverse. The other correspondent also approves of our criticism, but thinks it ought to extend further, and to other corporations, and that it is scarcely fair to restrict our censure to the Scottish Corporations. He reminds us that the Fellows of the College of Surgeons of England without examination exceed, or in 1880 did exceed, in number those who gained their Fellowship by examination. This is, no doubt, true. But in saying so one is slaying what has been already killed. The system, so far as the English College of Surgeons is concerned, is virtually at an end. The Fellowship is practically only to be had by examination, and by an examination that is undoubtedly not easy. The exceptions to this rule are alone enough to prove it, as will be seen by anyone who will refer to an editorial note at the end of the letter of F.R.C.S. Edin. in last week's LANCET. The case of the Irish College of Surgeons is similar.

There remain the cases of the Royal College of Physicians

of London and the King and Queen's College of Physicians in Ireland. In the case of the London College, Fellows, it is true, are elected and not examined. But they are elected on conditions very unlike those which obtain in the case of the Edinburgh College of Surgeons and the other Scottish Corporations. In the latter case Fellows are elected on showing that they possess a *minimum* qualification, medical or surgical, as may be the Fellowship to which they aspire, from any Corporation, and producing ordinary testimonials. In the case of the College of Physicians in London, on the other hand, a Fellow must be not merely a licentiate of the College, but a member, and to become either of these he must pass a corresponding examination. Not only so: the election is by the whole body of Fellows, and is a process of selection of men, already *members by examination*, who most commend themselves to the general body of Fellows by their scientific or professional position. No one could maintain that there is any comparison between such a system and that of the Scotch Corporations.

The case of the King and Queen's College of Physicians is more open to question. Those who were licentiates of the College before December 12th, 1878, may be admitted members without fee or examination, under certain conditions. In other cases there is an examination. Only members of the College are eligible to the Fellowship, and elections to the Fellowship are by ballot.

The Government has promised that the whole system of higher qualifications shall be inquired into by the Royal Commission which is to be appointed. That such an inquiry should be necessary, as it certainly is, after twenty-one years' operation of the Medical Act, is the most serious condemnation of both the Medical Council and the Medical Corporations. It is fully that time since the Medical Council expressed its condemnation of a system by which high sounding titles were granted without examination, and it was no care of the Medical Council to see that its opinions were accepted. It had an easy conscience, that could go on registering honourless honours without compunction and without complaint to the Privy Council.

WE had hoped that the recommendation of Lord CRANBROOK'S Committee, that in the matter of honours and rewards "the Medical Department should be judged rather by the standard for combatants than by that for non-combatants," would have been carried out by the military authorities. But we regret to find that on one of the first opportunities for doing so—the distribution of honours for services during the late Afghan campaign—this principle has been ignored by the Horse Guards, and the recommendations for the appointment of medical officers to the Order of the Bath have been made in accordance with the long established practice, and bestowed, as of old, with a niggardly hand. It is too bad that when the principle recommended by a Committee appointed to inquire into the grievances of an important branch of the public service has been accepted and adopted by the Secretary of State for War it should be in the power of the authorities at the Horse Guards to disregard the decision, and to continue a system of injustice which has, in past days, tended greatly to bring the Medical Department into such disrepute that it was impossible to get candidates for it to come forward, and which contributed to bring about a state of affairs that rendered a liberal expenditure of money necessary to rehabilitate the department. To expect justice for medical officers from the Field Marshal Commanding-in-Chief appears, from his habitual action towards them, to be hopeless. We have received so many letters from correspondents complaining of this omission that we feel bound, in duty to the profession, to call the attention of Mr. CHILDERS to the injustice which has been done on the present occasion, in the hope that he, as the responsible head of the army, will intervene to obtain for the medical officers that recognition to which their services entitle them. The events of the wars in Afghanistan, Zululand, and the Transvaal have shown too clearly how unjust it is to class them as non-combatants, and on no other ground can we understand the niggardly distribution of honours to them. We trust that Mr. CHILDERS will show himself above such petty feelings as seem to have influenced the Horse Guards, and that, in addition to rectifying the present regrettable omission, he will take steps to prevent a repetition of it, either by laying down imperative rules for the conduct of the Horse Guards in such matters, or by removing from them the duty of recommending medical officers for honorary distinctions, and taking it into his own hands with the aid of his responsible and impartial advisers.

Annotations.

"Ne quid nimis."

THE ROYAL COMMISSION ON THE MEDICAL ACTS.

So far the Government have made no change in their proposals for the constitution of a Royal Commission on Medical Acts *minus* medical men. We cannot alter our opinion that in this course the Government is altogether wrong. It would be difficult to select an instance in which a Commission to carry out an investigation affecting a large profession or body of men has been appointed without including representatives of that profession or body of men. What has the medical profession done that it should be treated so exceptionally? It would be an insult to the medical profession to argue that there is anything in medical men, or in the organisation of the profession, to justify the Government in treating them as they would not treat lawyers or ecclesiastics, railway and mining authorities, shipowners, &c. It is quite true that the public interests are the first to be consulted by a Royal Commission, but there are also professional interests, and there is no real antagonism between the two. But this exclusion of medical men, by whomsoever sanctioned or advised, cannot be real. It is impossible that a body of laymen can proceed for one day without consulting medical men. And their thoughts in the absence of medical commissioners will infallibly turn to members of the Medical Council, which has so fatally misled Governments for the last ten years, and whose administration is now challenged. It is strange for a Liberal Government so to treat the members of a liberal profession. It would be far better to put on the Commission two or three members of the General Medical Council itself, and two or three medical reformers, that the real questions at issue between them may be duly raised, sifted, and settled.

THE DEATH OF THE EMPEROR OF RUSSIA.

HER MAJESTY'S subjects of all classes are deeply impressed with the horror of the politico-social situation in Russia. Regret at the lamented death of the Emperor, sympathy with the Imperial Family in its bereavement, and indignation stirred by the hideous crime which has been committed, possess the public mind here as in every civilised community. If we of the medical profession are more particularly interested in the medical features of the sorrowful event, it must not be supposed that we are not keenly alive to its other aspects. The reports which have reached us from various sources as to the precise nature of the injuries sustained by the deceased Emperor are conflicting, but they agree in showing that the direct effects of the explosion on the lower limbs constituted the proximate cause of death. The bones of both legs below the knee were severely fractured, and the soft parts lacerated to an extent and in a manner which seem to have astonished the experienced surgeons in attendance. The fingers of the right hand were crushed, there were wounds on the face, but the stress of the injury fell on the lower extremities. The immediate cause of death was loss of blood. This is a most regrettable feature of the case. As soon as medical aid was procured, doubtless such measures as were practicable were taken to arrest the hæmorrhage; but a long interval elapsed before this assistance was available! There would seem to have been no medical men at hand, a wholly unaccountable circumstance, considering the perpetual peril to which the Emperor was exposed; and not one of those around His Majesty appears to have been acquainted with the ordinary measures for the temporary stoppage of the flow of blood. We must postpone, for the present, a critical summary of the medical aspects of this deplorable case; but it is a duty to give expression to the very painful feeling left on the mind of the medical profession in England by the imperfect reports which have been published.

SECONDARY SUTURE OF NERVES.

AMONG the advances in nerve pathology and therapeutics of the last few years, not the least interesting and important have been the practice and results of surgical interference. The operation of nerve-stretching has established itself as a recognised proceeding, and recent experience is rapidly extending its sphere of usefulness, although its *rationale* is involved in considerable obscurity. The primary suture of divided nerves has been practised for several years, and many recorded and unrecorded cases testify to its value. Quite lately, however, the secondary suture of nerves has been practised, and although not with uniform success, yet with most encouraging and, we may add, surprising results. The best test cases are those of union of severed motor nerves, for the return of sensation in parts supplied by a divided and then sutured nerve is open to another explanation than that the nerve trunk has again become capable of conducting sensory impressions. For this reason a case of Langenbeck's, of secondary suture of the musculo-spiral nerve, is very valuable. The patient, a labourer, thirty-one years of age, received a severe contusion of the outer side of the right arm below the middle, which was attended with paralysis of the extensor muscles of the forearm and hand. An abscess subsequently formed and was opened. Two-and-a-half months after the injury, as the paralysis continued, Langenbeck cut down upon the divided nerve, freed its ends, which he found lying two centimetres and a half apart, and united them by a catgut suture. Although there was considerable tension, healing took place by first intention, and nineteen days afterwards the extensors reacted to the induced current, and after a month and a half considerable active extension movements were possible. Mr. Hulke has brought forward at the Clinical Society a case in which he had united the cut ends of the median nerve nearly six weeks after the injury, and another case in which he practised a similar operation on the ulnar nerve fifteen weeks after division, and in each instance there was distinct evidence of restoration of function. Esmarch and Létiévants have each had a case of suture of the musculo-spiral nerve, the former successful. These and other like cases afford great encouragement not only to unite by suture the cut ends of nerves in recent wounds, but, where necessary, after cicatrisation is complete.

MEDICAL REFORM.

A CIRCULAR has been issued to members of the profession residing in Yorkshire inviting them to attend a meeting convened for Wednesday, April 6th, at 5 P.M., in the Philosophical Hall at Leeds, to consider the subject of medical reform. We concur in the opinion expressed in this circular that the success or otherwise of medical reform must depend on the opinions which the profession hold on the subject; and shall therefore watch with considerable interest the result of this meeting. Those who have been mainly instrumental in inciting this movement are anxious, as we are, to ascertain the feeling of the profession on this important subject, and we know of no more effective means of arriving at a correct conclusion on the subject than by observing the spirit evinced at a meeting of this kind. It is not so much by what is said on such occasions that the feeling of the profession is to be gauged; it is the tone and the number of men attending such an assembly which make it a valuable test of the earnestness of the professional mind in the matter of medical reform. Probably there is no more appropriate place than Leeds in which to hold a meeting such as we have referred to. Its flourishing medical school, association with the names of many distinguished members of the profession, together with the proverbial shrewdness and steady purpose of Yorkshiremen, must render the expression of opinion emanating from the meeting of the 6th of April a fair indication of professional opinion regarding medical reform, and will largely influence the action of other towns with reference to the inauguration of meetings for a similar purpose.

SUICIDE IN PRISON.

THE Appendix to the Third Report of the Commissioners of Prisons contains the results of an inquiry as to suicides committed in local prisons during the five and a half years ending March, 1879. It appears that during this period no less than 81 cases of suicide occurred in the various English prisons. The statistics now published point exclusively to one fact—that the tendency to suicide is greatest during the first few weeks of imprisonment; the 81 cases reported upon included 31 during the first week, 19 in the following three weeks, and 17 during the second month of residence in prison. Thus 67 of the 81 cases of suicide occurred during the first two months of imprisonment. No prisoner committed suicide who had been more than twelve months in confinement; and it is noticed that, relatively to number of prisoners, the proportion of suicides in local prisons was more than four times that occurring among convicts undergoing penal servitude. Of the 81 cases of suicide in prison, no less than 28 occurred among prisoners under remand or awaiting trial, the remaining 53 occurring among those undergoing sentence. As the average annual number of prisoners under remand or awaiting sentence was only 1270, against 18,530 undergoing sentence, it follows that the proportion of suicides in the five and a half years was equal to 22 per 1000 in the former, against 2·8 per 1000 in the

latter class. These figures should serve as a warning to prison authorities as showing that it is eight times as necessary that those prisoners under remand or awaiting trial should be as closely watched with a view to the prevention of suicide, as those undergoing sentence. It appears, moreover, that among an average number of 1712 prisoners sentenced to penal servitude, and awaiting removal from the local prisons to the penal servitude or convict gaol, nine committed suicide in the period under notice, whereas only ten suicides occurred during the same period among an average population of 10,000 prisoners undergoing sentence in convict prisons. The Medical Inspector in his report appears justified in concluding that penal servitude inspires fear and dread, which is not found to be justified by actual experience. The last report shows that during the year ending March, 1880, the number of suicides in prisons declined from 18, which was the average annual number during the five and a half preceding years, to 12. Notwithstanding this reduction the proportion of suicides was just six times as large among the prison population during the year under notice as it was among the population of England and Wales, at the ages 15—55, during the year 1879. It is easy to understand that the tendency to suicide is greater among prisoners than among the general population, but that actual suicides are proportionally six times as frequent among them, as in the general population at similar ages, does not reflect credit upon the management of prison authorities, who cannot be unaware of this tendency to suicide, especially in those recently committed to prison, and who should secure the means for more effectual watching. It may be hoped that the proportion of suicides in gaol will be still further reduced under improved prison management.

BATTEY'S OPERATION.

THE operation of spaying women suggested many years ago for certain conditions by the late Dr. Blundell, and revived within the last ten years by Dr. Trenholme, Dr. Battey, and Dr. Hegar, is still *sub judice*. It has been proposed and practised for several conditions—as severe dysmenorrhœa; profuse menorrhagia, threatening life; certain cases of amenorrhœa, in which grave constitutional disturbance was, or was believed to be, dependent on the activity of the ovaries; certain mental or nervous states believed to be dependent upon the ovaries, as threatened insanity, epilepsy, and hystero-epilepsy. The operation is one, however, which has not as yet received the full acceptance, nor the entire condemnation of the profession. That the profession as a whole have suspended judgment upon it is right, because the data for the formation of a just and correct opinion of its value are as yet insufficient and inconclusive. It was at first proposed under the belief that removal of the ovaries would immediately bring on the menopause, and at once arrest the uterine functions; but the physiological theory of the dependence of the uterine upon the ovarian function has been called in question, and it cannot be denied, however strong the evidence may be for the old view, that there is a good deal of evidence in favour of the new. But the fact that the physiological basis of the operation is called in question would not be sufficient to condemn or even to suspend judgment upon it, were its results uniform and certain. It is, however, well known that these results are neither uniform nor certain. In some cases the menopause has been brought about, while in others such has not been the result. In some the nervous symptoms and suffering have been cured, in others relieved; in others, again, there has been no improvement. The best results appear to have been obtained where the operation was performed in cases of fibroid tumours of the uterus; but here, again, the results have not been uniform. Moreover, the mortality has hitherto been high. If the operation should prove in its results to be of great value, there can be little doubt that means will be found to reduce the present large mortality. But there are other difficulties to be overcome before it can be fully accepted as a legitimate proceeding. Just as there is a difference of opinion as to the part played by the ovaries in health, so there are great differences of view as to the part played by them in disease. The difficulties of diagnosis are at present enormous. Perhaps few observers would be found to agree as to what phenomena are to be considered as reflex, arising from disease of the sexual organs, and what not, and what could be referred to the ovary and what not. It is true that some specialists ascribe much to the uterus or to the ovaries; but we cannot help thinking that they ride their hobby somewhat hard, and that much of what is now called uterine or ovarian neuroses, is so called upon totally insufficient evidence. It is by no means impossible—nay, it is not improbable, that many of these are really dependent on general or central, and not on local pelvic conditions. Lastly, supposing that ovarian mischief is evident, and that the nervous, mental, and other phenomena are dependent upon it, a difficulty at present insuperable may be met with—viz., the ovaries may be so bound down by adhesions, so encased in tough membranes, that their removal is not practicable. Such cases have already been met with, and portions of the ovaries have been left behind by some of the most accomplished operators. This fact is of the greatest importance in the discussion of a proceeding of so grave a character. To render spaying a legitimate operation, it is necessary to prove: (1) the dependence of the symptoms, for the relief of which the operation is proposed, upon diseased ovaries; (2) the inefficiency of any other means for their relief or cure; (3) the feasibility of the removal of the diseased organs. We cannot help thinking that if these considerations have due weight, the number of cases in which the operation will be undertaken will be limited. For reckless operating in cases in which the above conditions are not fulfilled, we have no sufficiently strong words of condemnation.

A PIECE OF GOOD IRISH WORK.

WHEN so many painful circumstances in Ireland occupy public attention it is gratifying to give publicity to a most satisfactory and creditable experiment on the part of the Guardians of the Cork Union. This has reference to the boarding-out of pauper children. The Cork Union speaks with the authority of eighteen years' experience of this system, and they show that it contrasts favourably with the workhouse plan. It is cheaper, the children are remarkably healthy and happy, and in a large majority of cases are adopted by the foster parents. The foster parent is appointed on the recommendation of local clergymen, and is generally either a small farmer or a well-to-do labourer. From 1862 to the present there were 630 children removed from the workhouse and boarded out in several favourable districts, seaside or mountainous, in which the union abounds. Of this number 209 are at present boarded out, and 417 have been adopted by their foster parents and are going on well, twenty died, and four have returned to the workhouse and are now ready to go out to service. We have seldom recorded a social or sanitary experiment which gives us more pleasure. Here are 417 children at the age of thirteen, on the application of their foster parents, taken off the rates and off the roll of pauperism to start fair in the world. There must be much good in a race that can so deal with one of the saddest social problems. Much importance is attached by the committee to the supervision of relieving officers, assisted by clergymen and ladies, and to the periodical reports of the dispensary medical officers on the

health of the children. This report, signed by the chairman of the Boarding-out Committee, Mr. Wm. D'Esterre Parker, is worthy of the serious attention of the Local Government Board and of all guardians. On the score of economy alone the experiment is entitled to attention. A child in the workhouse at Cork costs the union 3*s.* 6*d.* a week, or £9 a year; while outside, over two and under five, it costs 11*s.* 6*d.* a month, or £6 14*s.* a year; and over five and up to thirteen 12*s.* 2*d.* a month, or £7 6*s.* a year.

PNEUMOCONIOSIS.

IN a pamphlet, entitled "De Las Pneumoconiosis," by Rosalino Rovira y Oliver, the following conclusions are arrived at. The inhalation of pulverulent substances is not inoffensive, as maintained by Parent-Duchâtelet, but is, on the contrary, likely to occasion serious pathological processes, the gravity of which will be greater in proportion as the powders inhaled are harder and more rough. The pathological processes excited, which have received the name of pneumoconiosis, are distinct from pulmonary tuberculosis and from caseous pneumonia. In every point of view—etiological, pathogenic, pathological, syndromic, semeiotic and therapeutic — they deserve separate and special recognition and description in all works on medicine. In consequence of the different methods in which the pulverulent particles act, distinct states or kinds of pneumoconiosis are produced, and these may be grouped into the two following forms. First, those forms of disease which are produced by powders possessing but little hardness, and, secondly, those resulting from the action of powders the particles of which are very rough and hard. This mode of grouping proves of service in determining the treatment, for in those forms which result from the inhalation of soft powders the remedies employed should be those which augment the secretory activity of the respiratory tract, together with appropriate dietetic treatment. In the case of diseases produced by hard powders, on the other hand, no pharmacological substances are of service, but the patient should be at once withdrawn from further exposure to the dust, and placed under more favourable hygienic conditions.

SEATS FOR SHOP WOMEN.

WE wonder how many of the humane ladies who are just now rushing from shop to shop making their purchases for the season give a thought to the sufferings entailed on the young women serving behind counters and in show-rooms by the stout refusal of their employers to provide them with seats for use in the brief intervals of business. We have from time to time during the last year printed a list of firms which, in response to our appeal, have consented to provide their female *employées* with sitting accommodation, and—which is another and a greater matter—to allow them to make use of it. Ladies have this reform in their own hands. It is useless to form associations for promoting the movement, and it is weak to perpetually "petition" the shopkeepers. If customers would simply *see* that seats are provided and used, and patronise only those establishments where the necessary measures are carried into effect, the thing would be done. Unfortunately, however, when a lady visits a shop she is all engrossed with the wares offered for sale and her own wants, so that the "movement," to which she has perhaps given her name and money an hour or two ago, is forgotten. There is not the slightest necessity for any special organisation in the matter. If the feeling of sympathy for suffering, often expressed, were real, those who profess it would not fail to impress the fact on the shopkeepers to whom they give their custom. Nothing less than the commercial logic of business returns will bring this matter home to the consciences of retail shopkeepers. And the recourse to this convincing mode of reasoning is open to to every lady who is in earnest in the matter; but how few are!

THE NEW CROWN REPRESENTATIVE FOR IRELAND IN THE GENERAL COUNCIL.

THE Crown has appointed Dr. Alfred M'Clintock as its representative in the General Medical Council. We gladly express our approval of the appointment, which is in accordance with the wishes of a deputation from the Dublin Obstetrical Society. Dr. M'Clintock is worthy of this honour on personal grounds. He is an accomplished physician, an ex-Master of the Rotunda Hospital, the editor of the Sydenham Edition of Smellie's "Treatise on the Theory and Practice of Midwifery," and the author of many finished works on Obstetric and Gynæcological subjects.

The appointment of an obstetric physician is an innovation of some significance, and very creditable to the Government. The diseases of women and children make up a large share of medical practice, which has been too lightly regarded by the General Medical Council. All English attempts to get this branch of practice recognised have been unavailing. But better days are, we trust, coming, and the Medical Council will ere long, perhaps, represent all departments of medical practice.

FOOD OR DRUG?

WE are glad to see that the *Standard* has admitted to its columns letters which call attention to the nature of some of the dietetic drinks which are just now much in vogue in teetotal circles. It is so manifestly unadvisable to make an habitual use of articles which should be used only when wanted, and under medical advice, that it is only necessary to allude to the fact that many persons nowadays are drinking as table drinks what in reality are medicines, and we are sure that our readers will agree with us in strongly condemning the practice. One of the letters makes a suggestion in which we thoroughly agree, and have often taken occasion to urge—viz., that drinks which bear popular names should have their exact compositions affixed to the label. We do not think that this should be merely optional, but in justice to the public it ought to be enforced by law. A really good article would benefit if its composition were known, and if the sale of trashy substances were lessened in consequence, only the vendor would suffer, while the public would gain immensely. The Adulteration Act should be applicable to patent and secret articles of diet as well as to foods of recognised composition, and this will only be possible when the law requires every packet or bottle to bear a distinct and definite statement of its ingredients.

THE POLICE COURT v. THE SURGICAL AID SOCIETY.

THE Surgical Aid Society must be a society of considerable merit. Nothing less would explain its survival, in spite of the most injurious impressions produced on the public mind by its rules. Last week a poor woman appeared at the Guildhall Police Court, and applied to Sir Thomas S. Owden for assistance to procure a medical appliance for her husband, who was suffering from rheumatism. The poor woman was in the usual difficulty of applicants to the Society. The cost of the article she wanted from the Society was 50*s.*, and she required ten letters of 5*s.* each. By much labour she had managed to procure seven letters, but the last three were too much for her strength and leisure, and so she came to the police magistrate. It is a strange inversion of experience to be driven from a charitable society

to seek help in a police court. The magistrate naturally said, that to require the full value in tickets of an applicant was not charity, but trade; and the public will agree with him. He gave the applicant 20*s*. The police magistrate is not supposed to be either an authority as to the therapeutic value of appliances for the treatment of rheumatism, or a charitable institution. But the public will easily forgive his good nature, and condone the gift of 20*s*. from the poor-box.

HOSPITALS FOR WOMEN.

"COUNCILLOR TAIT, in seconding the resolution, said the Women's Hospital had become of great importance, not only to the town of Birmingham, but to the country at large, for not only had the staff been able to do the work which they had undertaken to do better than it had been done anywhere else, but they had done work which had never been done anywhere else previously. Although he was bound to speak it with becoming modesty, still, as a member of the staff of a hospital doing altogether new and original work, he could not conceal from himself the pleasure he had in sharing in it, nor did he think that those who subscribed to the charity ought to be in ignorance of the fact that that hospital had become a pioneer in surgical work, the staff having performed in its wards operations which had never been attempted elsewhere."—*Birmingham Daily Gazette*, March 9th, 1881.

It is scarcely credible that the above paragraph was spoken by Mr. Lawson Tait, the surgeon to the Women's Hospital. We earnestly trust that the contributions made to medical literature by this sage councillor have more foundation in fact than the above mass of nonsense; for we can assure him that had he made himself acquainted with the literature of the diseases of women, he would have found that no legitimate operation is performed in the Birmingham Hospital for Women which is not done with at least equal success elsewhere.

MEDICINE IN RUSSIAN TURKESTAN.

THE official *Gazette of Turkestan* states that at the beginning of the year there were in Russian Turkestan 2 urban medical men, 18 district, and 24 midwives, and that during the year 1879 they had given their attention to 28,868 patients, of whom 6931 were Russians. The military medical men, moreover, had had under care 1260 patients. The patients attended among the indigenous population included 13,106 Sartes, 5144 Khirgises, 865 Tartars, 563 Kaschgarians, 165 Uzbecks, 146 Hindus, 144 Persians, 69 Chinese, 31 Afghans, 30 Bukharians, 24 Karakalpacks, 23 Turcomans, and others.

SEA-WATER BATHS.

WE have long advocated the organisation of a system by which sea-water baths might be placed within the reach of residents in London. A company, having for its object the promotion of this enterprise, is, we are glad to see, about to be established. There are to be tepid swimming sea-water baths for gentlemen, and a similar provision is to be made for ladies. Hot sea-water baths, and douche, and shower baths are included in the programme. The sea-water is to be brought to the baths in specially constructed steam vessels. This, it is said, can be accomplished in a few hours, and the sea-water is not expected to lose any of its qualities *en route*. The projected establishment is to be erected on the Thames Embankment. Without in any way committing ourselves to the details of the scheme, or offering an opinion as to the probabilities of practical success, we most cordially commend an effort which has the high guarantee of Mr. Brill's experienced management. The well-known proprietor of the Brighton Baths brings special knowledge to the enterprise. If it fulfils the purpose set forth it cannot fail to confer very substantial advantages on a large class of our fellow citizens.

A GOOD EXAMPLE FOR GUY'S

A WISE and proper recognition of the medical staff has lately been shown in the government of St. Bartholomew's Hospital, at the instance, we believe, of Sir Sydney Waterlow. Sir Sydney proposed that Sir James Paget, Sir George Burrows, Dr. Farre, and Mr. Luther Holden should, in consideration of their services to the hospital, be made governors. The proposal was accepted. Such a course is creditable equally to both parties—to the governors and to the members of the medical staff.

IT is a remarkable circumstance that our "Obituary" this week contains notices of the decease of two gentlemen—Mr. Godrich and Dr. Richards—who were associated with the late Mr. Wakley in his successful effort to secure a due pecuniary recognition of the services of medical men as witnesses, and as examiners for Life Insurance Societies.

MR. GEORGE SMITH, of Coalville, in again calling attention in the newspaper press to the sad condition of the children on board canal boats, in spite of recent legislation, states that within the last three weeks seven deaths from small-pox have occurred on such craft between London and Birmingham.

BY the anti-liquor law of the State of Kansas, to come into force in May next, physicians are required to make affidavit that they will not prescribe intoxicants except in cases of actual illness, whilst druggists must file all prescriptions containing alcoholics in the same way as they do all kinds of poison.

WE are informed that Dr. Cory has been appointed Director of the Government Animal Vaccine Station in progress of establishment in London. On Tuesday last, accompanied by Dr. Cameron, M.P., he inspected Dr. Cook's Vaccine Farm at Manningtree, Essex.

THE death, on the 23rd ult., of Dr. G. A. Otis, surgeon of the United States Army, is announced. At the time of his death Dr. Otis was engaged in the preparation of the third volume of the surgical series of the Medical and Surgical History of the Rebellion.

PROFESSOR CHARCOT has been summoned to Russia professionally, and while there the medical profession have shown him much honour. A banquet, organised by alienist physicians, has been given him in St. Petersburg. Eighty guests sat down at table.

THE honorary degree of LL.D. has been conferred on David Ferrier, M.D., by the University of Aberdeen.

AT an ordinary meeting of the Birmingham and Midland Counties Branch of the British Medical Association, held on the 10th inst., the following resolution of the council of the branch was received and adopted:—"That in the opinion of this council the promoters of the Skin and Lock Hospital have acted irregularly and prejudicially to the public interest in the election of medical officers by mere nomination at a private meeting convened by circular. The public and the profession have a right to require that public medical offices shall be publicly filled, and that they shall be open to competition."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kendal.—Dr. Page's report for the borough of Kendal during the year 1880 gives the general mortality at the "high rate" of 23·2 per 1000 of the estimated population (14,300). The cause of the unusual mortality is assigned to the fatal prevalence of scarlet fever, a concurrent outbreak of measles contributing to the result. The birth-rate of the borough for the year was 33·8 per 1000. Dr. Page discusses the influence of "masked" attacks of scarlet fever upon the efficacy of precautionary measures and upon provisions for the notification of infectious diseases; and he is inclined to the opinion that insanitary circumstances exercise an influence upon the fatality of the malady. He is of opinion, moreover, that early hospital accommodation for the isolation of cases would have proved helpful in controlling the spread of the disease. The chief administrative event recorded is that the Sanitary Authority of the borough has determined to undertake the removal of house refuse. We do not quite understand whether this includes excremental refuse, but we trust it to be the case, for it seems particularly paradoxical that the authority should concern itself with the removal of the least harmful sort of refuse, while the most harmful is left to accumulate in the midst of the houses.

Dublin.—Dr. Cameron reports for the five weeks ended 29th January, 1881, a death-rate in the annual ratio of 42·1 per 1000 persons living, a higher rate than for the corresponding period of the last ten years. The greater mortality was chiefly due to diseases of the organs of respiration. The only zymotic diseases showing increase during the period were "fevers," and of these principally typhus. But Dr. Cameron states that the present epidemic of that disease is not extending, and he has "no apprehension of its assuming anything like the proportions of former outbreaks of this formidable disease." In his remarks upon the inspection of "tenemental dwellings" Dr. Cameron observes:—"The denizens of the kind of tenements which we are from time to time closing up are of the poorest classes of society. The great majority are labourers and their families; fruit, fish, and vegetable dealers; hawkers, vendors of small wares, and not a few street beggars. Such people, unfortunately, too often reduce to a filthy and dilapidated state houses at first tolerably clean and in good repair. When they are turned out of one house they go into another, and soon render it also 'unfit for habitation.' For the use of the great majority of these people cottages ought to be constructed by the municipality under the provisions of the Labouring Classes' Dwellings Act. These cottages being under proper supervision by the authorities, could be kept in a better sanitary condition, and their inmates under some kind of discipline (so far as keeping their rooms clean, &c.), than appears to be practicable in the case of the lowest class of dwellings owned by private landlords."

Ilfracombe.—Dr. Slade-King reports for 1880 a birth-rate of 24·8 per 1000 population, and a death-rate of 13·8. Increasing attention appears to be given to the sanitary arrangements of this favourite health-resort. Important sewerage works were carried out during the year, and the means for an earlier and completer removal of house-refuse were improved. The sanitary authority here, as sanitary authorities elsewhere, has its difficulties with builders who endeavour to evade the carrying out of plans of new buildings deposited with the sanitary authority and approved by them. But the authority seems determined not to have its by-laws set at nought.

Kingston-upon-Thames.—Mr. C. M. Shirtliff reports for this borough in 1880 a death-rate of 17·3 per 1000 population, and a birth-rate of 38·0. He writes favourably of the general sanitary condition of the district, but he thinks that the sanitary authority should, in view of satisfactorily meeting any epidemic, first seek provision for the compulsory notification of infectious diseases (this is spoken of as "the very step" they should take), and next ("next to which in importance") provide a disinfecting apparatus and a hospital for infectious diseases. This seems to us very like "putting the cart before the horse."

St. Marylebone.—Mr. Wynter Blyth has issued the first of a series of annual reports under the ingenious title of "The Sanitary Chronicles of St. Marylebone." The illness and death of Dr. Whitmore prevented his making a report for 1879, and Mr. Blyth, although only lately appointed to the medical officership of health of the parish, was unwilling that a gap of two years should exist in its sanitary annals. He has, therefore, prepared the report for 1880 now before us. Although he tells us that he has given "considerable labour" to the preparation, it appears to us to present in more than one place indications of haste. In an account of Dr. Robert Dundas Thomson, the first medical officer of health for St. Marylebone, which is couched in language that seems to imply the only work in which he had been employed in by Government was "to make some experiments relative to the feeding of animals;" no allusion is made to the important work Dr. Thomson did for the Committee of Scientific Inquiries of the General Board of Health during the Cholera epidemic of 1854; and the disproportion between the data given on p. 19 and the inferences sought to be drawn from them, detract from the reader's interest in the report.

ST. PANCRAS AND ITS "DUST."

The vestry of St. Pancras has deferred the question of "dusting" arrangements for the parish until October, which, as we take it, means that the inhabitants of the parish are once more to be exposed (or are likely to be exposed) to the terrible nuisance from which they suffered during the summer and autumn of last year, from the scandalous imperfection of the arrangements for removing the dust. At the meeting during which the motion for further delay was carried out, one member claimed that £1400 had been saved on the last year's dusting, and another set forth as subject for congratulation that, of 24,000 dust-bins in the parish, requests for removal of the contents (complaints of non-removal said another) had only been received in respect to 18,000! Not a word appears to have been said about the sanitary discomfort of the parish during this reign of filth, or, if said, the subject elicited but small remark. It is high time that Section 43 of the Public Health Act, 1875, which enables householders in the provinces to deal more or less effectually with local authorities who undertake the removal of dust, should be made to apply also in the metropolis.

SANITARY HOSPITAL, NEWCASTLE-UPON-TYNE.

It is pleasing to receive from Newcastle-upon-Tyne a report of a Committee of the Corporation upon a proposed new sanitary hospital containing provision for small-pox as well as other infectious diseases, but which does not appear to be hampered with the difficulties of site we have to contend with in the metropolis.

It would appear from a statement of Mr. Henley, of the Local Government Board, at a recent meeting of the Reading Board of Guardians, that small-pox is beginning to extend from the metropolis into the neighbouring districts. Cases are recorded at Guildford, Staines, and Windsor, on the one side, and Aylesbury on the other.

The Jarrow Town Council appears to have got into some difficulty with the medical men in the town, in which its medical officer of health is concerned, respecting the carrying out of some of the provisions of its Local Act affecting infectious diseases.

The Aylesbury Local Board of Health have declined to act upon a suggestion of the Local Government Board that they should combine with the Rural Sanitary Authority in the election of a medical officer of health.

The Fulham Guardians have consented that the District Board shall have certain detached buildings under their control for use as temporary small-pox hospitals, if required

It would appear that certain of the London boards of guardians "contract" for their ambulances, and we hear of children playing about the parish ambulances in one of the mews in St. George's, Hanover-square!

The magistrate at Worship-street has imposed a fine of 10*s.* with 2*s.* costs upon a woman for removing from her house to another house, without previous disinfection, a bed on which a person had died from "fever."

The *Metropolitan* gives currency to a rumour that the Metropolitan Asylums Board will, in consequence of the recent decision in the House of Lords, resign in a body.

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The loitering of ambulances in the streets on their return from the metropolitan infectious disease hospitals is occupying the attention of the Asylums Board.

A case is reported from Lambeth of a woman, a milk-dealer, continuing to attend to her business while in attendance upon a child suffering from small-pox.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

English urban mortality continues satisfactorily low compared with the average rate for the season. In twenty of the largest English towns, estimated to contain in the middle of this year nearly a third of the entire population of England and Wales, 5829 births and 3357 deaths were registered last week. The births exceeded by no less than 653 and the deaths by 100, the average weekly numbers during 1880. The deaths showed a further increase of but 2 upon the low numbers returned in the two previous weeks, and were equal to an annual rate of 23·0 per 1000; in the two previous weeks the rate was equal to 21·9 and 23·0. The lowest death-rates in the twenty towns last week were 15·8 in Brighton, 18·7 in Bradford, 19·3 in Sunderland, and 21·0 in Hull. The rates in the other towns ranged upwards to 26·6 in Oldham, 26·7 in Liverpool, 27·8 in Leeds, and 28·8 in Manchester. During the past ten weeks of the current quarter the death-rate in the twenty towns averaged 24·6 per 1000, against 25·7, the average rate in the corresponding periods of the five years 1876–80.

The deaths referred to the principal zymotic diseases in the twenty towns, which had been 290 and 296 in the two previous weeks, further rose to 311 last week; these included 84 from whooping-cough, 63 from scarlet fever, 59 from small-pox, and 33 from fever, principally enteric. The annual death-rate from these principal zymotic diseases averaged 2·1 per 1000 in the twenty towns, and ranged from 0·5 and 1·2 in Brighton and Norwich, to 2·7 in Leicester and Newcastle-upon-Tyne, and 3·1 in Oldham. Whooping-cough showed the largest proportional fatality in Nottingham, Manchester, and Leeds; and scarlet fever in Oldham, Leicester, Bristol, and Norwich. Nine of the 12 deaths from diphtheria in the twenty towns occurred in London. The death-rate from fever was again generally low, but showed an excess in Salford, Newcastle-upon-Tyne, and Leeds. Small-pox caused 60 more deaths in London and its outer ring of suburban districts, one in Manchester, and not one in any of the nineteen other provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased in the nineteen preceding weeks from 77 to 779, further rose to 792 on Saturday last. The new cases of small-pox admitted to these hospitals, which had increased from 176 to 195 in the four previous weeks, were 180 last week. The Highgate Small-pox Hospital contained 60 patients on Saturday last, showing a further increase upon the numbers at the end of recent weeks; 25 new cases were admitted to this hospital during last week.

The deaths referred to diseases of the respiratory organs in London, which had been 367 and 419 in the two preceding weeks, declined again to 384 last week, and were 70 below the corrected average number in the corresponding week of the last ten years; 242 resulted from bronchitis, and 91 from pneumonia. The annual death-rate from lung diseases (excluding phthisis) was equal to 5·4 per 1000 in London last week; the rate from the same diseases in Liverpool was 8·1.

The causes of 81, or 2·4 per cent., of the deaths in the twenty towns last week were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths did not exceed 1·1 per cent. in London, while it averaged 3·6 per cent. in the nineteen provincial towns. No uncertified causes of deaths were registered last week in Portsmouth, Norwich, Plymouth, and Newcastle-upon-Tyne; while their proportion was largest in Salford, Hull, and Oldham.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate averaged 23·4 per 1000 last week, against 22·5 and 22·9 in the two preceding weeks; this rate was 0·4 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 17·2 and 20·2 in Leith and Edinburgh, to 27·5 and 31·2 in Paisley and Perth. The deaths referred to the principal zymotic diseases in the eight towns, which were 70 and 83 in the two previous weeks, were 82 last week, and included 31 from whooping-cough, 13 from diarrhœa, 13 from diphtheria, 11 from scarlet fever, 10 from "fever," 4 from measles, and not one from small-pox. The annual death-rate from these zymotic diseases was equal to 3·2 per 1000, and was 1·1 above the average rate from the same diseases in the twenty English towns; this zymotic rate in the eight Scotch towns last week ranged from 0·0 and 1·1 in Perth and Paisley, to 3·7 and 5·2 in Glasgow and Leith. The fatal cases of whooping-cough in the eight towns, which had been 17 and 28 in the two previous weeks, further rose to 31 last week, of which 15 occurred in Glasgow, 7 in Dundee, and 4 in Leith; the fatal cases in Edinburgh showed a considerable decline. The 13 deaths referred to diphtheria were fewer by 5 than the number in the previous week; 8 occurred in Glasgow and 2 in Leith. The 13 fatal cases of diarrhœa included 5 in Glasgow and 3 in Edinburgh. Of the 11 deaths from scarlet fever 7 were returned in Glasgow and 3 in Edinburgh. The deaths referred to "fever," which had been 14 and 6 in the two previous weeks, rose again to 10 last week, of which 5 occurred in Glasgow, 4 in Edinburgh, and 1 in Paisley; the annual death-rate from "fever" in the Scotch towns was last week nearly twice as high as the average rate from the same cause last week in the twenty English towns. The deaths referred to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy), which were 150 and 179 in the two preceding weeks, declined again to 168 last week, and were equal to an annual rate of 6·7 per 1000; the rate from the same diseases in London did not exceed 4·5 per 1000. The largest excess in the fatality of lung diseases in the Scotch towns occurred last week in Glasgow, Dundee, and Paisley.

HEALTH OF DUBLIN.

Although slowly decreasing, the rate of mortality in Dublin continues excessive. The annual death-rate in the city, which had slowly but steadily declined from 47·4 to 36·0 in the six preceding weeks, further fell to 33·8 last week. During the past ten weeks of the current quarter the death-rate in the city has, however, averaged no less than 39·5 per 1000, against 24·1 in London and 22·7 in Edinburgh. The 216 deaths in Dublin last week showed a further decline of 14 from recent weekly numbers, and included 23, or rather more than 10 per cent., which were referred to the principal zymotic diseases, against 31, 24, and 21 in the three previous weeks. These 23 deaths from zymotic diseases included 10 from fever (including typhus, enteric or typhoid, and simple continued), 5 from diarrhœa, 3 from scarlet fever, 2 from diphtheria, 2 from whooping-cough, 1 from measles, and not one from small-pox. The annual death-rate from these zymotic diseases was equal to 3·6 per 1000 in Dublin last week; it was only 2·3 in London and was 2·9 in Edinburgh. The deaths referred to fever, which had been 17, 10, and 8 in the three preceding weeks, were again 10 last week; these were equal to an annual death-rate seven times as high as the average rate from the same causes last week in the twenty large English towns. The fatal cases of diarrhœa were more numerous, while those of scarlet fever and whooping-cough showed a decline from recent weekly numbers. The 2 deaths from diphtheria also exceeded the numbers returned in recent weeks. The deaths of infants were fewer than in any previous week of this year, and the deaths of elderly persons showed a further decline from recent weekly numbers.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

TRICHINIASIS.

The Local Government Board have held it advisable to issue a circular to sanitary authorities, together with a memorandum prepared by their medical officer, Dr. Buchanan, on the subject of trichiniasis (although the Board have no information of the present existence of the disease in Great Britain, and trust that its prevalence is not to be apprehended). The circular directs attention to this disease in connexion with the consumption of the imperfectly cooked flesh of pigs infested with trichinæ, and sug-

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gests increased vigilance on the part of medical officers of health and inspectors of nuisances in carrying out their instructions with regard to diseased, unsound, or unwholesome meat. The memorandum briefly sets forth the precautions requisite to be taken to obviate the danger which may be feared from any accidental use of pig's flesh which may chance to be infested with trichinæ. "Inasmuch," it says, "as the meat infested with these worms cannot be recognised by any popular test, and the worms themselves can only be detected by careful microscopic examination, it becomes important to take precautions against harm to man in the case of meat from all pigs. The only known means of avoiding disease in man from this dangerous quality of meat from pigs is by very thorough and efficient cooking. If there is reason for thinking a particular sample of meat to contain the parasites it ought not, on any account, to be eaten, no matter how it is cooked. Hams, sausages, and like articles, whether or not they have been smoked or salted, should never be eaten in the raw state. To be efficient for the required purpose the cooking of pork, of hams, of bacon and of other articles, should be prolonged for about half as much time again as is customary. The smallest joint should be cooked for not less than an hour; and whatever be the size of the joint, it should have not less than half an hour's cooking for each pound of meat. No part of a joint that is seen to have an underdone portion in it should be eaten. In boiling hams and pork, the meat should be put into cold or lukewarm water, and the period of cooking should be reckoned *from the time when the water boils*. In boiling several joints of pork or several hams (as required at institutions and elsewhere), they should not be put together in bulk at the same time into the same cooking vessel. Each joint should be put into a separate vessel, and boiled with a good quantity of water. Though the caution is not given for the avoidance of the particular diseases here in question, the present is a useful opportunity to mention that it is of much importance to health to see that larders, and places where cooked meat is stored, are kept always clean and free from the chance of foul air entering them. Serious outbreaks of disease are appearing with some probability to be related to neglect of this precaution."

THE REPORT OF THE NATIONAL BOARD OF HEALTH, U.S., FOR 1880.

The annual report of the National Board of Health, U.S., for 1880 shows a large amount of excellent work, scientific and other, done during that year, and gives good promise that the objects sought to be secured by the promoters of the Board will be fully secured. The United States of America form a big country, and it will require time before local jealousies can be wholly overcome and before the *national* aim of the Board, as distinguished from the *local* efforts of particular States, will be thoroughly apprehended. Nothing could well contribute better to smooth any friction arising from State jealousies and over-sensitiveness than the account of the work done by the Board in 1880. It is work in which the United States may well take a *national* pride, and which will presently place the National Board in the fore-front of those bodies which exercise the greatest influence in the hygienic progress of the human race. The mere list of work done by the Board in 1880 is too long to admit of a place here, and happily the United States is so generous in distribution of the bulletins of the Board that the recapitulation is unnecessary.

THE SERVICES.

THE BATTLE OF LAING'S NEK: GENERAL COLLEY'S DESPATCHES.

It is gratifying to record that in the despatch describing the action of Laing's Nek on the 28th of January, the late gallant Commander-in-Chief in the Transvaal does not forget the valuable services rendered by the Medical Department. The following extract from his report will be noted with much interest:—"Surgeon-Major Babington was in charge of the field hospital, and laboured zealously and untiringly to meet the heavy calls made upon him and his medical staff. (Surgeons E. King and J. McGann, A.M.D., and Surgeon E. E. Mahon, R.N., Her Majesty's ship *Flora*, distinguished themselves by their attention to the wounded under fire.) The ambulances were formed close in rear of the position taken up, and were soon crowded with wounded; but through the great exertions of Surgeon-Major Babington and his assistants, with ready help from the transport and the regiments, the wounded were all cared for and brought into camp before night."

The Right Hon. the Secretary of State for War has presented a silver medal to Surgeon J. M. Giles of the Indian Medical Service, the winner of the Herbert Memorial prize at the last session of the Army Medical School, Netley. Mr. Giles obtained the first place in the competitive examination for commissions in the Indian Medical Department.

Deputy Surgeon-General Thompson, Bombay Medical Service, has been appointed Principal Medical Officer, Southern Afghanistan Field Force, vice Deputy Surgeon-General Bruce.

Surgeon-Major R. Hare, Surgeons G. H. K. O'Callaghan and R. T. MacCreery embarked for India in H.M. troopship *Serapis* on the 17th inst.

Surgeon-Major G. White embarked on board the *Persian Monarch*, on Wednesday, for the Transvaal, in medical charge of troops.

Surgeon General Thomas Longmore, C.B., Professor of Military Surgery in the Royal Victoria Hospital, Netley, has been granted the vacant pension of £100 a year for distinguished and meritorious service.

INDIA OFFICE.—The Queen has approved the following retirements from the service of the undermentioned officers:—Surgeon-Majors William John Palmer, M.D., and Archibald Macdonald Garden, of the Bengal Army; Surgeon James Atkinson West Spence, of the Madras Army; and Surgeon Daniel Henry Cullimore, of the Madras Army.

It is announced from Calcutta that the Government has sanctioned the formation of a native army hospital corps, to be established on a footing similar to that on which the English army hospital corps is based.

ADMIRALTY. — The following appointments have been made: Staff Surgeon James Robinson to the *Ranger*; Surgeon G. T. O'Grady to the *Egeria*, vice Cann; Staff Surgeon Robert Turner to the *Duke of Wellington*, in lieu of a surgeon; Staff Surgeon James Bradley to the *Asia*, in lieu of surgeon, vice M'Ivor; Staff Surgeon George B Murray to the *Swift*, when commissioned; Surgeon Richard J. Barry to the *Indus;* Surgeon John Wood to the *Audacious*, vice Robertson.

INTERNATIONAL MEDICAL CONGRESS, 1881.

Museum Section.

A TEMPORARY museum will be opened during the sittings of the Congress in the rooms of the Geological Society. All objects of novelty or rarity having reference to the processes of disease or the results of injury will be acceptable for exhibition. The committee in charge of it will be especially obliged by the loan of drawings, photographs, and models, for the efficient display of which careful arrangements will be made. They will be glad to receive and exhibit all preparations and drawings used for the illustration of papers in the various sections, or having reference to the subjects discussed. There will be an exhibition of living examples of certain rare diseases. Arrangements will also be made for the exhibition of a limited number of microscopic objects. In most instances it will perhaps be found convenient for the exhibition of special series to take place at fixed times, previously arranged and announced, at which the exhibitor will probably attend to give explanations. All communications regarding the museum are to be addressed to the Secretary of this Section—Mr. H. H. Clutton, 16, Palace-road, St. Thomas's Hospital, S.E.

THE CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Lord Aberdare presided on Wednesday at the twenty-ninth anniversary of this institution, held at Willis's Rooms. A large and distinguished company assembled on the occasion, and over £2000 were collected. The committee are desirous, as soon as sufficient funds are forthcoming, to complete the plans originally designed by the late Mr. Barry, by which an addition of eighty beds would be effected.

MEDICAL NOTES IN PARLIAMENT.

Prevention of Floods.

IN the House of Lords on Thursday (10th) their lordships went into Committee on the Rivers Conservancy and Floods Prevention Bill, which had been considered by a Select Committee. Certain amendments proposed by Lord Spencer, who has charge of the measure, were agreed to by their lordships. One of them had for its object to enable the District Inspector or the Local Government Board to entirely exclude a district from taxation by way of contribution to the drainage. An amendment proposed by Lord Carrington, for the relief of middle and low lands, was rejected. A new clause, moved by Lord Spencer, to enable conservancy boards to construct works for arterial drainage and for the storage of water, as subsidiary to the objects of the Act, was so much objected to in discussion that the noble earl ultimately withdrew it. Lord Jersey proposed, in Clause 19, an amendment to alter the incidence of taxation from the plan laid down in the clause; but, after some discussion, it was negatived without a division. This, and the remaining clauses, having been agreed to, the Bill passed through Committee, and was reported, with amendments, to the House.

On Tuesday the report of amendments on the Alkali, &c., Works Regulation Bill was received, after another protest by Lord Midleton against the insufficient character of the measure. The report of amendments on the Rivers Conservancy and Floods Prevention Bill was also received.

In the House of Commons on Thursday, the 10th inst., Mr. Massey, chairman of the Select Committee on the Contagious Diseases Acts, reported that, in the opinion of the Committee it was desirable that Dr. Farquharson and Dr. Cameron should be added to the Committee. Subsequently Mr. Childers moved that it was agreed to enlarge the Committee by adding those two hon. gentlemen.

On Monday a petition for inquiring into the East India Army Medical Department was presented from Joseph J. Monteath. The twenty-second report of the Board of Superintendence of the Dublin Hospitals was presented.

Vivisection.

Mr. Pease gave notice that on Thursday he would move an address for copy of any report from the inspectors, showing the number of experiments performed on living animals during the year 1880, under licences granted under the Act 39 and 40 Vic., c. 77, distinguishing painless experiments from painful experiments (in continuation of Parliamentary Paper, No. 125, of Session 1880).

Vaccination in Prisons.

Mr. Yorke asked the Secretary of State for the Home Department whether the medical officers of Her Majesty's prisons are required by the regulations to vaccinate all children born in the prisons before they are allowed to go out; and, if so, whether such regulations are strictly enforced, especially in the case of the female prison at Westminster. Sir W. Harcourt said there was no absolute rule on the subject, nor could there be. It was uncertain at what age a child might be when the mother was discharged. As a general rule, a child was vaccinated in prison when it was old enough, and the mother made no objection. The answer he had received to an inquiry was, that all of the children born in Westminster prison were vaccinated if they were old enough, and not too delicate.

Fever and Small-pox Hospitals.

Mr. John Talbot asked the President of the Local Government Board whether, after the recent decision of the House of Lords in the Hampstead Hospital case, he is prepared, by legislation or otherwise, to secure to the inhabitants of the metropolis the advantages which were intended to be conferred by the establishment of hospitals for fever and small-pox under the provisions of the Metropolis Poor Act, 1867. Mr. Dodson said he was desirous of securing to the inhabitants of the metropolis the advantages intended to be conferred by the establishment of hospitals for small-pox cases under the Metropolis Poor Act; but the matter was one of much complication, and he was not prepared, until he had had more time to review the whole subject, to indicate what steps should in his opinion be taken to meet the present difficulty. He might add that the recent decision of the House of Lords had only been given with regard to one of the appeals in the case, and a month had been allowed to the managers to prosecute the second appeal if they thought proper to do so.

Scotch Medical Relief.

Mr. Crum asked the Financial Secretary to the Treasury whether, after hearing the statement of a deputation from the parochial boards of Scotland, he had given an undertaking that he would grant an increase in the medical poor-law grants if the parochial boards were willing to allow the poor-law supervision to exercise some control over the appointment and dismissal of their medical officers. Lord F. Cavendish thanked his honourable friend for the opportunity thus afforded him of removing a misapprehension. He pointed out to the deputation that if Scotland was to be placed in the same position as England with regard to grants in aid of medical relief the conditions must be the same, which could only be done by legislation. In equalising these grants consideration should be given to others, such as that for pauper lunatics. The Government were considering the subject at large, and meanwhile they would not increase the grant.

On Tuesday, in reply to Mr. Hopwood, the Marquis of Hartington admitted that the Contagious Diseases Acts had been reapplied to Bombay, in spite of a strong objection expressed by a large number of influential natives and Europeans; but stated that it was found necessary to do so, and every precaution had been taken to limit the operation of the Acts strictly to the class of women for whom they were intended.

Army Medical Officers.

On Wednesday the following notice was given for Monday:—Mr. Findlater, to ask the Secretary for War whether, having regard to the cases of wounds and sickness which have occurred amongst medical officers during recent campaigns, he will take into consideration the justice of extending to the Army Medical Department the privilege now enjoyed by all combatant officers of counting as full-pay service towards retirement any time on half-pay, not exceeding one year, when such half-pay has been necessitated by sickness incurred in and by the Service; also such half-pay as results from reduction of the department, not exceeding two years, as laid down in Army Circulars, March 1st, 1880.

On Thursday, on the motion of Mr. Pease, an address was agreed to for a return of the number of painless and painful experiments performed on living animals during the year 1880 under the 39th and 40th Vic. On the motion of Mr. Courtney a return was ordered of the annual report of the Assistant-Commissioner of Metropolitan Police for the year 1880 relating to the Contagious Diseases Acts.

Animal Vaccine.

Mr. P. A. Taylor gave notice that on Tuesday next he would ask the President of the Local Government Board if he would state to the House the source whence the new animal lymph was to be obtained, whether the calves were now inoculated from a diseased horse, or from a human being suffering from small-pox, or from what other source. Dr. Cameron asked the President of the Local Government Board whether any steps have been taken to give effect to his promise, made on the 11th of June last, that the Vaccination Department should supply calf lymph as "stock" for vaccination to such medical practitioners as preferred it to ordinary humanised lymph; and whether, in view of the alarming spread of small-pox in London, the department would consider the propriety of taking measures to secure a sufficient supply of vaccine lymph for the purpose of revaccination. Mr. Dodson: Yes, sir; steps have been taken in pursuance of that promise. Careful inquiry has been made by the medical officers of the Local Government Board as to the arrangements in Belgium and elsewhere for the supply of calf lymph, and we have been engaged for some time in endeavouring to find suitable premises for an establishment in the metropolis. This has been a matter of some difficulty, but I am happy to say that the matter has so far progressed as to enable me to appoint a medical director for the establishment, and to arrange with the Treasury as to the staff. In answer to the last question I have already stated that the department is not intended to supply a sufficient quantity of lymph for revaccination. The object for which the National Vaccination Establishment was set up

was to supply a certain quantity of lymph for the purposes of primary vaccination.

The Indian Army Medical Department.

Sir Trevor Lawrence asked the Secretary of State for India when the despatches regarding the reorganisation of the Indian Army Medical Department promised by him will be placed upon the table of the House; and when the Royal Warrant fixing the new scale of retiring allowances for Indian medical officers will be published. The Marquis of Hartington said papers on the subject were being prepared for presentation to Parliament, but in order to make the case complete it was thought desirable to include a despatch of the Government of India containing a statement of the nature of the improved scale of pensions for the medical service. As soon as the despatch was approved by the Council papers would be presented.

Correspondence.

"Audi alteram partem."

FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

To the Editor of THE LANCET.

SIR,—More than a quarter of a century since, when I became a Fellow of the Royal College of Surgeons of Edinburgh, by examination, and after a long course of study, it was an honour and a distinction to possess this diploma. The older Fellows must have seen with regret the deterioration of the qualification during the later years, and must, as I do, feel great cause of thankfulness to yourself and others who are endeavouring to awaken the Edinburgh College to a sense of its responsibilities to the public, the profession, and to its own members.

It is humiliating to have a qualification which I have held and valued so long dragged in the dirt as a bogus diploma, and it is, besides, a great injustice.

Yours faithfully,

March 8th, 1881. AN OLD FELLOW BY EXAMINATION.

To the Editor of THE LANCET.

SIR,—I have read with interest the leader in your issue of March 5th on the Fellowship of the Royal College of Surgeons of Edinburgh, and must applaud your outburst of virtuous indignation against honorary distinctions. I should, however, be glad to see you go a little further, and include in the condemnation the other Colleges besides those of Scotland which also grant Fellowships and other higher titles without further examination. These are the Royal College of Physicians of London, the Royal College of Surgeons of England, and the King and Queen's College of Physicians in Ireland. From an answer to a correspondent in THE LANCET for Oct. 23rd, 1880, I learn that there were in the Calendar of the College of Surgeons for that year the names of 1215 Fellows, 558 of whom obtained the distinction after examination. On 657, therefore, the distinction must have been conferred without examination; and many of these took their diplomas of Member years ago, when the examinations for that qualification were, to put it mildly, less severe than they are now.

The whole question of the granting of higher distinctions to gentlemen already qualified, without further examination, is one well worthy of discussion; but it is scarcely fair that the Scotch Colleges should be held up for execration as if they were the only corporations which followed the practice. Nor has the Edinburgh College of Surgeons been so lavish in its bestowal of Fellowships as might be supposed from your article. On the 20th October, 1880, the number of Fellows of the College was 463, whereas at the same period it appears, from what I said above, that there were 657 Fellows of the English College who had obtained the distinction without examination. I hope you will follow up your leader with an equally vigorous attack on *all* honorary medical qualifications.

Trusting to your sense of justice to insert this, I remain, yours faithfully, F.R.C.S. ED., M.R.C.S. ENG.

March, 1881.

INTRA-UTERINE STEMS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of March 5th, under the heading "Ovarian Dysmenorrhœa, with Retroflexion," &c., Dr. Ernest Herman states that his letter "has elicited from Dr. Wynn Williams that he does not know the termination of many of the cases which he has treated with his intra-uterine stems," and enters into a tirade against uterine stems generally, but considers that the one associated with my name is the least dangerous. I should strongly recommend Dr. Ernest Herman to read over his request for information, and he will find he asks to be informed how many cases were followed by impregnation after wearing the stem and shield, not whether any dangerous symptoms followed the introduction. Dr. Ernest Herman makes a most unjustifiable statement in the remark, "Dr. Wynn Williams has not seen any bad results, because he has not inquired as to the subsequent course of all his cases." The knowledge as to the termination of the cases, and the knowledge as to whether the patients became pregnant, is, as your readers can well understand, quite another thing. I defy Dr. Ernest Herman to bring forward a single instance of death following the introduction of the stem and shield in one of my own patients. That death has followed the introduction and use of *fixed* instruments I think no one will be found to deny. I never heard of but one instance where a patient of mine fell into the hands of another practitioner when anything like serious symptoms followed the use of the stem and shield, and that was mentioned at the Obstetrical Society some years ago by Dr. Edis. The case mentioned by Dr. Daly had nothing whatever to do with the stem and shield.

In my own practice I have never seen any ill consequences follow the introduction of the stem and shield that has not been immediately remedied by its removal. I have seen much more serious mischief follow the clumsy introduction of the sound, and how many deaths have followed the abuse of the hysterotome it would be difficult to state. In conclusion, I beg to assure your readers that I am fully cognisant of all the cases I have treated with the stem and shield, and they amount to many scores; so far no death has followed, but as to how many became pregnant, the greater majority having been unmarried, it is impossible for me to state. I may, however, be allowed to state that since the publication of my remarks in your valuable journal I have received several letters from medical men informing me of patients who have become pregnant after wearing the instrument associated with my name, and also from patients themselves who had heretofore been sterile and suffering from dysmenorrhœa, due to anteflexion.

I am, Sir, yours truly,

Montagu-square, March 7th, 1881. A. WYNN WILLIAMS.

"ABERYSTWYTH: A FASHIONABLE WATERING-PLACE."

To the Editor of THE LANCET.

SIR,—We, the undersigned members of the medical profession practising in Aberystwyth, beg to express our astonishment at the remarks made in the last issue of THE LANCET under the above heading. It is quite clear that you have been misled by the misrepresentations that have from time to time appeared in the *Cambrian News*. We fearlessly assert, and are prepared to prove, that nothing exists in this town to justify the conclusions you have come to as to its sanitary condition.

As to our sanitary arrangements we submit the following facts. Our new gravitation scheme provides the town with an abundant and continuous supply of water, pronounced by Frankland as one of the finest and purest in the United Kingdom. The drainage of the town, which was thoroughly carried out by an eminent engineer at a very large outlay, was finally inspected and highly approved of by Mr. Arnold Taylor, one of the Local Government Board Inspectors. As to the general sanitary arrangements of the town, we can safely pronounce them to be all that can be wished for. It is scarcely necessary for us to point out to you how seriously

a paragraph such as the one referred to appearing in your valuable journal affects the interest of a town which so much depends upon visitors.

We confidently appeal to you to give the same prominence to this refutation that was given to the paragraph in question.

We are, Sir, your obedient Servants,

THOS. D. HARRIES, F.R.C.S. (Exam.) Eng.
C. RICE WILLIAMS, M.D.
RICHARD GILBERTSON, M.R.C.S.
MORRIS JONES, Med. Off. of Health, Aberystwyth.
JACOB ROBERTS, M.R.C.S.
JOHN MORGAN JONES, M.R.C.S.E.

THE DANGER OF NON-COMBATANTS IN BATTLE.

To the Editor of THE LANCET.

SIR, — As many people not conversant with military matters are undoubtedly under the impression that medical officers are but little if at all exposed to danger in war, and as they are consequently relegated to a position less honourable than their combatant brothers (for in battle the post of danger is the post of honour), it appears to me that every opportunity should be taken to dissipate these erroneous opinions.

Recently in the House of Commons the Under-Secretary of the Navy pointed triumphantly to the number of fatal casualties among the officers and men of the Naval Brigade engaged in the defence of the Majuba mountain as affording abundant evidence that the British sailor, now as in the days of Nelson, knows how to do his duty. Accepting this as a fair standard of the bravery of combatants, whose duty is to fight, it must also be accepted as regards the so-called medical non-combatants, whose more special duty is coolly to aid their wounded fellows in times of danger, but who, as the records of battle and the following statistics show, often combat the enemy as well :—

	No. of Officers engaged.	Killed or died of wounds.	Wnded.	Un-wounded Prisoners.	Wounded Pri-soners.	Escapd.
Army Officers	31	2	7	6	1	13
Naval Officers	2	2	0	0	0	0
Medical Officers	2	2	0	0	0	0
Army Service Corps	1	0	0	0	1	0

These records speak for themselves. The number of medical officers may be too limited for strict comparison, but they are as numerous as the officers of the Naval contingent. And if of these and also of Army officers it has been truly said that they nobly did their duty, it cannot be denied that the non-combatant medical officers most nobly did theirs.

I assume I am correct in stating that the number of medical officers engaged were two, as it is very unlikely that more would be attached at the front with three or four hundred men; moreover, no others appear in the lists from the seat of war.—I am, Sir, your obedient servant,

D. H. CULLIMORE,
Surg. I.M.D. (retired).

Connaught-square, March 6th, 1881.

IRELAND.

(*From our own Correspondent.*)

UP to the present, so far as can be gleaned in reference to the plan of organisation for the Royal University of Ireland, it appears that the inducements to students are of the amplest kind, the pecuniary attractions being most profuse. It is, however, one thing to formulate a scheme for endowments in connexion with a university, and a totally different thing to find that the Government will adopt the scheme as proposed in its entirety, and pledge itself to support it in the liberal manner suggested.

Dublin, for a considerable period, has exhibited an excessive death-rate as compared with other cities, and the returns for the past year prove that no improvement in this respect has taken place. So far back as July last, a resolution was adopted by the Council of the Irish College of Surgeons that an expression of opinion should emanate from them in reference to the causes which had produced, and were still producing, the unhealthy state of the city, and the abnormally high death-rate in Dublin. For this purpose a committee was appointed to confer with the College of Physicians in Ireland, and make a report as soon as possible to the council. Eight months have now elapsed since this resolution was passed, and at last the conjoint report of the colleges has been issued. The report attributes the extraordinary mortality of Dublin chiefly to the general insanitary arrangements of dwellings, the uncleanly and intemperate habits of certain classes of the people, and the spread of infection. The Colleges suggest the adoption by the Public Health Committee of certain measures calculated to remove the evils and defects indicated.

The Committee of the National Eye and Ear Infirmary, Dublin, in their report for 1880, state that there was an increase in the number of patients admitted to the wards of the hospital, and in the total number of patients registered. The hospital will continue in its old premises, Stephen's-green, until the end of March or beginning of April, when it will be moved to Molesworth-street, when some important alterations and additions have been completed. The new hospital will contain thirteen male beds, and an equal number for females, with separate day-rooms for each sex, operating-room, ample accommodation for nurses, and also, if desired, accommodation for a resident surgeon.

In the report of the Education Committee of the Royal College of Surgeons upon the proposed Scheme of Education and Examination for this College, which is now under consideration by the Council, it is satisfactory to learn that Midwifery is included in the list of subjects upon which a candidate will be examined. A considerable amount of doubt exists as to whether, when the various suggestions of the Education Committee are approved by the Council, it will come into force, or whether it must first receive the sanction of the Fellows at large.

It is intended by the friends of the late Dr. Peele of Dublin to erect a window with a mural tablet in St. Patrick's Cathedral to the memory of the deceased. An influential committee has been appointed to carry out this object, and to receive subscriptions, which are limited to one guinea.

Dublin, March 15th.

Obituary.

FRANCIS GODRICH, M.R.C.S., L.S.A.

MR. FRANCIS GODRICH, whose death occurred, as already announced, on the 8th inst., at Fulham-road, West Brompton, at the advanced age of eighty-five years, had been in practice in that neighbourhood for sixty years. For half a century he had been officially connected with St. George's Workhouse, and for nearly the same period he was medical officer of the Brompton District of the Kensington Union, as well as surgeon to the Police for upwards of forty years. He became a Licentiate of the Apothecaries' Society in 1818 and a Member of the Royal College of Surgeons in 1819. He was a life governor and one of the original founders of the Medical Benevolent College at Epsom, one of the founders of the Chelsea Benevolent Society, and for the greater part of his long life took a prominent lead in all the movements for the improvement of the district in which he resided, and of the condition of its inhabitants.

Few men have done more to raise the status of the profession. Of this, one fact may be recorded. In 1834, when called upon to give professional evidence on an inquest, he refused to do so without remuneration; he was threatened with the usual pains and penalties, but persisted; the result being that he was appointed chairman of a committee through which the late Mr. Wakley, M.P., introduced, and carried, in the House of Commons the Medical Witnesses Bill, a measure by which the payments of fees to medical witnesses was rendered compulsory. For many years he devoted special attention to small-pox and revaccination, and was an earnest and persistent opponent to the Fulham Small-pox Hospital; holding the opinion that it was a centre of infection to the immediate neighbourhood surrounding districts. His experience as Medical Officer to the Brompton District, adjacent to the Hospital, led him to this conclusion, and to the decided opinion that the aggregation of large numbers of cases of this disease intensified and extended its area of contagion and its infecting power to a far greater extent than is at present generally supposed; indeed, his

death may be attributed in some degree to his advocacy of this opinion, for it was soon after delivering an excellent speech at the Chelsea Vestry Hall on this subject that he was seized with apoplexy, which in less than two days afterwards terminated his long and useful life. His death will be greatly mourned not only by his relatives and friends, but by the inhabitants of the district generally, for his long career was distinguished by kindness and generosity to all—more especially to the poor, to whom he was a true friend.

SAMUEL RICHARDS, M.D.

DR. RICHARDS was born on March 30th, 1808. He was articled to the late Mr. Jarman of Nottingham, and afterwards studied at Guy's Hospital. He commenced practice in Bedford-square, and continued it in the same locality for nearly fifty years. Dr. Richards was associated with the late Mr. Wakley, Dr. Beaman, Dr. Tyler Smith, and others, in the foundation of the New Equitable Life Office, in 1851. This office was established to enforce the principle that medical men should be paid a proper and remunerative fee for their professional opinions of the health and probable longevity of proposed assurers; insisting that the opinion was asked for in the interests of the office, and not of the patient: also that medical men should be regarded as agents, and receive the same consideration in cases sent by them to the offices that is awarded to solicitors. In 1862 the New Equitable was amalgamated with the Briton. It is computed that the profession has received in fees from the New Equitable and the Briton offices over 250,000 guineas.

Dr. Richards suffered from disease of the heart for many years, but his devotion to the profession was such that, in spite of the advice of medical friends, he continued to practise until last June, when failing health obliged him to retire and abandon the hope he so often expressed, that he might "die in harness." He died on March 7th from bronchitis and heart disease, with the usual complications.

Medical News.

CAMBRIDGE UNIVERSITY.—At a special congregation on the 9th inst., the degree of Bachelor of Medicine was conferred on Samuel Nall, St. John's College.

MR. W. F. FULLER, late Assistant Resident Medical Officer of the St. Marylebone Workhouse, has received a superannuation allowance of £80 a year.

THE GLASGOW OPHTHALMIC INSTITUTION.—At the annual meeting of the friends of this charity, it was announced that the subscriptions during the past twelvemonth had been in excess of the year preceding by £199, chiefly derived from workpeople. The hospital is to be extended, by the addition of a storey to the main building and one to the wing in Wellington-street, thus supplying a new operating theatre lighted from the roof. It is proposed to make the consulting physician, acting surgeon, and acting physician *ex officio* members of the Board of Directors.

SANITARY ASSURANCE. — On Tuesday night Professor F. de Chaumont delivered a lecture to a large audience at the London Institution on Sanitary Assurance. Mr. Erichsen, F.R.S., took the chair. The lecturer observed that of the 700,000 deaths per annum recorded by the Registrar-General consumption caused about 70,000; diseases of the respiratory organs, 100,000; diarrhœa, 33,000; enteric fever, 11,000; scarlet fever, 25,000; and diphtheria, 3500. Some of these diseases could be prevented altogether if dwelling-houses were put in a good sanitary state, and others might be modified to a very material extent. These diseases were propagated by foul air and foul water. The lecturer went on to show the fearful extent of mortality and sickness caused by defective sanitary arrangements, and to call attention to the Sanitary Assurance Association which had been formed last November. The object of this association was to inspect the sanitary arrangements of the dwellings of those who chose to become members. When a house was found to be in a proper sanitary condition a certificate would be granted. This work would be carried out under the personal supervision of the appointed officer, who would direct what had to be done, leave it to the occupant of the house to employ, if he chose, his own workpeople, and then, after seeing that the work had been properly done, grant the certificate above referred to. These advantages would be secured by the payment of a small entrance fee and annual subscription. Mr. Erichsen said that the work of the surgeon was materially retarded or aided by the sanitary state of the house in which the patient lay. He cordially approved of the association, and thought it had a large field of usefulness before it. On the motion of Sir Joseph Fayrer, seconded by Mr. Brudenell Carter, a vote of thanks was passed to the lecturer.

THE INTERNATIONAL MEDICAL AND SANITARY EXHIBITION.—The Committee, which met on Tuesday last, made considerable progress in the appointment of judges for the various sections. Among those who have consented to act as judges are, Dr. W. B. Carpenter, C.B., F.R.S., Dr. Garrod, Dr. Bristowe, Dr. Farquharson, M.P., Dr. Playfair, Dr. Buchanan Baxter, Mr. John Marshall, F.R.S., Mr. Critchett, Mr. H. Power, Mr. Tomes, F.R.S., Sir Joseph Fayrer, Mr. C. Heath, Mr. Bryant, Mr. T. Smith, Surgeon-General Longmore, C.B., Major Duncan, R.A., Captain Douglas Galton, C.B., Dr. Thorne Thorne, Professor Prestwich, F.R.S., Mr. Alfred Waterhouse, A.R.A., &c., &c. The Executive Committee of the International Congress have guaranteed £50 towards the guarantee fund (which now amounts to £1026 7s.), and it has been arranged that all members of the Congress shall be admitted free to the exhibition. We would remind our readers that the 31st inst. is the last day for making applications for space. It must be remembered that the Exhibition Committee are glad to receive *single articles* for exhibition, and thus scientific inventors will have an opportunity of displaying apparatus, &c., for a fee which is merely nominal. It is hoped, also, that hospital construction and arrangement will be represented, and that the medical officers and managers of public or private institutions will take steps to show ground plans and elevations.

THE FULHAM SMALL-POX HOSPITAL. — "The Times" of the 17th inst. contained the following:—"The Central Committee formed to take steps to prevent the reception of further small-pox patients into the Fulham Hospital has been sitting daily; and sub-committees have now been elected for the Kensington, Fulham, Hammersmith, and Chelsea districts respectively. A resolution has been passed by the Central Committee requesting their chairman, Mr. J. F. B. Firth, M.P., to ask Mr. Dodson, the President of the Local Government Board, to now receive a deputation of a small number of representative inhabitants of the borough of Chelsea on the subject of the spread of small-pox through the cases brought to the Fulham Small-pox Hospital, as the position of affairs is very different from that which existed when the right hon. gentleman was first asked to receive a deputation on account of the decision of the House of Lords in the Hampstead Hospital case, and as the two cases—those of Hampstead and Fulham—are precisely similar. The reply of Mr. Dodson has not yet been given. In the meantime subscriptions to the Guarantee Fund are flowing in to the committee; and it is understood that the latter will at once proceed to move for an injunction to prevent any further new cases being received into the hospital, and to close the same when the epidemic shall have ceased."

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest*

AITCHISON, J., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed Medical Officer of the Wallsend District of the Tynemouth Union.

ANGELL, Mr. A., has been reappointed Public Analyst for the Borough of Guildford for three years.

BYRNE, E. H., L.M., has been appointed Medical Officer to the High-street Dispensary District, Dublin, vice Peele, deceased.

COX, M. F., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Physician to St. Vincent's Hospital, Dublin, vice Cryon, deceased.

CRAWFORD, C. H., M.D., has been appointed Physician to the Staffordshire General Infirmary.

DAVEY, F. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Fifth District of the Royston Union.

EDWARDS, D. T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Pentyrch District of the Cardiff Union.

FAVELL, R., M.R.C.S.E., L.S.A.L., has been appointed one of the Medical Officers of the Jessop Hospital for Women, Sheffield, vice Dr. E. Jackson, resigned.

HOOPER, E. E., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Reigate Union.

JOHNSTON, R., F.R.C.S. & M.R.C.P., has been appointed Medical Officer of Health and District Medical Officer of the Wymondham Division of the Melton Union.

KISBY, G., L.F.P.S.G., L.K.Q.C.P.I., has been appointed to the Seventh District of the Ashton-under-Lyne Union.

LANSDOWN, F. P., M.R.C.S.E., L.S.A.L., has been reappointed Senior Surgeon to the Bristol General Hospital.

LUNDY, L. F., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Sunbury District of the Staines Union.

MOORE, T., F.R.C.S.E., has been appointed Visiting Surgeon to the Seamen's Hospital, vice Davies-Colley, resigned.

NELL, R. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Penarth District of the Cardiff Union.

PLUMMER, C. J., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Alton Union, vice Woods, resigned.

PYBURN, G. W., B.A., L.R.C.P.L., M.R.C.S.E., has been appointed Surgeon to the Hull, Barnsley, and West Riding Junction Railway and Dock Works.

REID, G., M.B., has been appointed Physician to the Staffordshire General Infirmary.

ROBINSON, A. H., M.D., M.R.C.S.E., has been appointed Surgeon to the Hull, Barnsley, and West Riding Junction Railway and Docks Works.

RUSSELL, W., M.B., has been appointed a Honorary Physician to the Carlisle Dispensary.

SAUL, W. W., M.D., has been appointed Surgeon to the Duke of Lancaster's Own Yeomanry Cavalry, vice Moore, deceased.

SPRAKELING, R. J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Bootle Urban Sanitary District for one year.

TREHARNE, J. L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Spottland District of the Cardiff Union.

WALSHAM, W. J., F.R.C.S.E., has been appointed Assistant-Surgeon to St. Bartholomew's Hospital.

WARD, H. D., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Blythe Urban Sanitary District.

WELCH, J. B., M.B., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Handsworth Urban Sanitary District for the ensuing year.

WILSON, F., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed to the Heighington District of the Darlington Union.

Births, Marriages, and Deaths.

BIRTHS.

BABER.—On the 14th inst., at Langton, near Tunbridge Wells, the wife of Henry Aitkens Baber, M.R.C.S.E., of a daughter.

COLGATE.—On the 3rd inst., at Tresserans, Eastbourne, the wife of Henry Colgate, M.D., F.R.C.S., of a son.

ELLISON.—On the 28th January, at North-terrace, Adelaide, South Australia, the wife of S. K. Ellison, M.R.C.S.E., of a son.

HIND.—On the 12th inst., at 3, Whitehall-place, Stockton-on-Tees, the wife of Henry Hind, F.R.C.S., of a son.

HORMAZDJI.—On the 11th inst., at the General Hospital Branch Dispensary, Cheltenham, the wife of R. N. Hormazdji, M.R.C.S.E. L.R.C.P. (Resident Surgeon), of a son.

MARRIAGES.

CHAPMAN—CRUMP.—On the 9th inst., at St. Margaret's, Westminster, Walter Chapman, F.R.C.S.E., of Lower Tooting, Surrey, to Martha, widow of the late Albert Crump, Esq., of Forest-hill, Kent.

DOUGLAS—FULLER.—On the 26th ult., at St. Andrew's Church, Pittsburg, U.S.A., by the Rev. Reese F. Alsop, Rector, William Douglas, M.D., of Belfast, Ireland, to Anna Marie, youngest daughter of the late Captain S. J. Fuller, H.E.I.C.S., of Canada.

RAE—DUNCOMBE.—On the 8th ult., at Christchurch Cathedral, Nassau, Bahamas, by the Rev. W. H. Strombom, Rural Dean, William Masters Rae, Esq., Surgeon, Royal Navy, R.N. Hospital, Bermuda, to Beatrice de Sansaure Kelsall, youngest daughter of the Hon. Frederick Duncombe, M.D., J.P., of Nassau.

DEATHS.

CHEYNE.—On the 6th inst., at Naples, after four days' illness, of acute meningo-encephalitis, George Cheyne, Esq., M.D.Edin., of 5, Bryanston-street, London, formerly of Mexico.

DAVIDSON.—On the 8th inst., at Bexley-road, Erith, Kent, James Davidson, M.D., M.R.C.P.L., Retired Fleet-Surgeon, R.N., aged 63.

STACY.—On the 12th inst., John Edward Stacy, F.R.C.S.E., of Cavendish-road, Brundesbury, in his 52nd year.

THORNTON.—On the 4th inst., suddenly, at his residence, Bank Lodge, Scarborough, William Henry Thornton, M.D., F.R.C.S.E., J.P., deeply regretted.

WILSON.—On the 4th inst., suddenly, at 9, Woodside-crescent, Glasgow, James George Wilson, M.D., F.R.S.E., F.R.C.S.E.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, March 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Henry Trentham Butlin, "On the Relations of Sarcoma to Carcinoma."
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—5 P.M. Dr. Julius Althaus, "On the Physiology and Pathology of the Olfactory Nerve."
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Spencer Watson, "On Unusual Affection of the Nose."—Dr. Wynn Williams, "On a Case of Rupture of the Perineum in a Child."—Dr. Gilbart Smith will exhibit a Specimen of Endocarditis with Embolism.

Tuesday, March 22.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Edward A. Schäfer, "On the Blood."
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Ordinary Meeting.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. C. Higgens, "On a Case of Vascular Protrusion of the Eyeball."—Mr. C. T. Dent, "On a Case of Innominate Aneurism treated by simultaneous Distal Ligature of the Carotid and Subclavian Arteries, with remarks on the behaviour of a Tendon Ligature."

Wednesday, March 23.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Henry Trentham Butlin, "On the Relations of Sarcoma to Carcinoma."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. Moxon, "On the Influence of the Circulation upon the Nervous System."
HUNTERIAN SOCIETY.—8 P.M. Adjourned Discussion on Dr. Herman's Paper ("Prolapse of the Ovaries").—Mr. McCarthy and Mr. James E. Adams, "On Cases of Varicocele treated by Excision."

Thursday, March 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND SCIENCES.—Professor John Perry, "On the Future Development of Electrical Appliances."
ROYAL INSTITUTION.—3 P.M. Mr. H. H. Statham, "On Ornament."

Friday, March 25.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor F. Treves, "On the Pathology of Scrofulous Affections of Lymphatic Glands."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. Moxon, "On the Influence of the Circulation upon the Nervous System."
ROYAL INSTITUTION.—3 P.M. Mr. A. Buchan, "On Weather and Health at London."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Mr. J. G. Waller, "On Cilona Celata: Does the Sponge make 'the Burrows?'"
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. J. R. A. Douglas, "On Cases of Varix treated by a new Instrument for Obliterating the Veins.—Dr. Whipham and Mr. Rick, "On a Case of Extirpation of the Larynx.—Mr. Spencer Watson, "On a Case of Intra-Cranial Disease involving several Cranial Nerves."—Dr. B. O'Connor, "On a Case of Syphilitic Psoriasis."
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND SCIENCES.—Sir George Campbell, "On the Tenure and Cultivation of Land in India."

Saturday, March 26.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Rev. H. R. Haweis, "On American Humorists."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 17th, 1881.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 11	30·09	W.	51	48	..	59	47	..	Cloudy
,, 12	30·00	W.	45	44	..	54	40	..	Foggy
,, 13	30·00	E.	43	42	..	50	39	..	Cloudy
,, 14	29·85	S.E.	41	39	..	48	38	..	Overcast
,, 15	30·20	E.	42	40	..	55	35	..	Foggy
,, 16	30.40	S.E.	41	39	..	60	36	..	Foggy
,, 17	30·52	S.	41	40	..	60	38	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

PRELIMINARY EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

IN answer to a large number of perplexed correspondents who have written to us respecting the preliminary examinations at the Royal College of Surgeons, we reproduce the subjoined official notice, dated January 13th, 1881:—

"Notice is hereby given that from and after the 31st December, 1881 the preliminary examinations for the diploma of member and of fellow of this College, at present conducted by the College of Preceptors under the authority of the College, will cease, and that, from and after the date of this notice, candidates for the diploma of Fellow will not be required to undergo any preliminary examination beyond that required for the diploma of member of the College."

MORBIFIC ODOURS.

To the Editor of THE LANCET.

SIR,—Taking a broad and therefore perhaps the only useful view of zymotic complaints, surely there can be no reason to puzzle oneself for an explanation of the phenomena mentioned by Mr. Bernard—at least, presuming the period of incubation in small-pox to be longer than a few days, the one word coincidence seems to me to be explanation enough. For example, my experience would tend to show that a day or two before a good honest "cold in the head" appears in its open form a state of exaltation or tension of the nervous system is usually felt, in which state one might easily imagine an extra keen sense of smell to exist.

Exposure to a draught or chill may be said to be the immediate or direct cause of a cold, but surely the proper view is that it acts merely as the "last straw," added to the pre-existing load, and if there is any point at all in that well-known saying about the camel's back, it lies in our attention being drawn to the heavy load, which, without the last straw, might have escaped our notice altogether. The period of incubation in all zymotic complaints is probably of much longer duration than we are apt to imagine, and unless we have faith to believe it, we might frequently be puzzled by such like coincidences as Mr. Bernard narrates.

I remain, Sir, yours obediently,

March 14th, 1881. F. ORTON, M.D.

To the Editor of THE LANCET.

SIR,—With reference to Mr. Alfred Bernard's letter in a recent number of THE LANCET, will you allow me to say that I have a large number of cases of variola coming to my notice, and having been accustomed to make careful notes of each case, can assure Mr. Bernard that the peculiar smell followed by the disease is of by no means an uncommon occurrence.

I am, Sir, yours, &c.,

March 14th, 1881. J. B. M.

CENSURE OF A MEDICAL MAN BY THE HONITON BOARD OF GUARDIANS.

WE share with Dr. Pullin regret that the patient was not seen earlier, but this partly arose from an insufficient message as to the nature and needs of the case. It is a pity that the criticism of the Board could not have been extended from the conduct of the medical man to the state of the cottages in which the poor man lived—and died. They are thus described by Dr. Pullin:—"During the first eight days of his illness he was living in a house under repair, in the walls of which were partially covered holes large enough for his child of ten to crawl through, and through which the cold—unprecedented during this century—of course freely entered, and his bedclothing was very limited. Late in the evening of the eighth day he moved—himself walking through the snow—to another house under repair, which had not been occupied for several weeks, and which was, I am informed, wet from top to bottom." It is lamentable to think of such cottages in connexion with the snow storms of January.

"COTTAGE HOSPITALS."

To the Editor of THE LANCET.

SIR,—It is stated in THE LANCET of Saturday last that at a meeting held at Chelmsford for the purpose of promoting the establishment of a cottage hospital there, Dr. Vipan said out of 260 cottage hospitals which had been founded in Great Britain only eight had failed, and those not from want of funds, but on account of theological disputes between members of rival sects. I almost fancy Dr. Vipan must have been imperfectly reported, as so far is the statement in question from being accurate that I have shown in my book on Cottage Hospitals, by giving the history of all the failures, that in only one instance—that of the Wrington Hospital—has there been anything approaching a religious difficulty. The secretary of this hospital was a Dissenter, and to ensure that all the patients should be sent to chapel and not to church, he bought the cottage hospital, and it was soon after closed. In speaking of the chaplains and religious services, I state, as the result of careful inquiry, "so admirably has the feeling of simple piety which animated the early promoters of this movement descended upon their successors and followers everywhere, that sectarian bitterness is entirely unknown to the managers of these little hospitals."

The point at issue is all-important just now to hospital managers generally, and so I venture to ask you to allow me to make this correction.

I am, Sir, yours, &c.,

Gloucester-road, Regent's-park, N.W., HENRY C. BURDETT.
March 14th, 1881.

Club.—It is a point of law, but a stamped receipt for any sum over £2 is necessary.

Dr. Dufey (Dublin).—In an early number.

Enquirens.—18 and 20, Kentish-town-road.

Mr. F. G. Taylor.—The case seems a hard one, but it is a question of arrangement between employer and employed.

Mr. Land's communication will appear in our next.

Country Practitioner.—1. Barnes or Galabin.—2. Tilbury Fox, Liveing, or Duhring.

Mr. George Moule Evans.—A medical officer has no legal right to question the "order" for "medical relief" given in any case, and it is unwise for him to do so. It would have been prudent to write to the clerk of the Board of Guardians, not to the overseers, and nothing should have been said to the patient. The case had better not be followed up. It is most desirable to avoid the sort of conflict these cases occasion.

"THE CASE OF PROBABLE POISONING BY COLCHICUM."

To the Editor of THE LANCET.

SIR,—From the report of this case, published by Dr. C. Budd in your issue of the 5th inst., I quote the following passage:—"To these symptoms were now added constant twitchings of the muscles, greatly aggravated by any movement." It has probably occurred to many persons who have read this that the exact time at which this peculiar and characteristic feature commenced is indefinitely fixed by Dr. Budd. The account in this respect, therefore, is misleading, for on this the whole gist of the case lies. It was clearly ascertained that the gentleman could have taken no pills after Sept. 2nd. The convulsive twitchings of the muscles commenced on the evening of the 17th. On the afternoon of that day he transacted business, and executed some mining setts. His lawyer confirms me in declaring that at that time he was perfectly steady and free from twitchings. Thus fourteen clear days elapsed before the distinctive symptom of the influence of colchicum arose, with persistent vomiting and diarrhœa during all the time. In these circumstances I was unable to concur with Dr. Budd in his diagnosis, preferring to regard this remarkable case as one due to blood poisoning from suppressed gout, in the causation of which it is probable that the colchicum acted only as a factor.

I am, Sir, your obedient servant,

Holsworthy, March 14th, 1881. LINNINGTON ASH, M.R.C.S.E

HYGIENIC INFLUENCE OF HOUSE PLANTS.

DR. ELY M'CLELLAN contributes to the *Philadelphia Medical Times* a note on the hygienic influence which may be exerted by house plants on individuals who are predisposed to phthisis pulmonalis. The writer has observed a case which he considers to be thoroughly corroborative of the view advanced by Dr. Anders—viz., that breathing continuously the atmosphere of apartments in which plants are kept tends to retard the progress of pulmonary consumption. The case was that of a young man whose mother died of phthisis at a comparatively early age, leaving a family of five children, four of whom were carried off by the same disease. The survivor, the young man in question, married at twenty-three, and was accustomed to complain of weakness of the chest and constant liability to take cold. Being an enthusiastic floriculturist, he stocked his bedroom and sitting-room with plants, and his health appears to have become highly satisfactory, if not robust.

Mr. C. B. Grant.—Dr. Richet's paper in THE LANCET of Jan. 1st and 8th of the present year may perhaps assist our correspondent.

Mr. J. C. Orchard.—Our Students' Number, published on Sept. 12th last, will give the information required.

N.—Our correspondent's ordinary medical attendant would be the best person to consult on the subject.

Mr. Joseph Miller.—The report was doubtless rather fuller than is usual of medical details, but having been given at the inquest, we do not see much reason to complain of their publication.

DESQUAMATION AND INFECTION IN SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—Allow me to remark on this subject that I consider the "Medical Attendant at the College" referred to, by isolating the boy for three weeks, did all that was necessary, as far as quarantine was concerned, to prevent the spread of infection.

It is certainly not my experience that desquamation is delayed in mild cases of scarlet fever. I find it always follows on the disappearance of the rash, though frequently in so minute a form as to be passed unnoticed. I have met with a few mild cases where, after the shedding of this almost invisible epidermic dust, an unusual interval elapsed, and then the thicker epidermis of the palms of the hands and the soles of the feet began to chip and peel. In two cases—both consumptive lads—this interval was nearly five weeks. I did not regard this late desquamation of these parts as infectious, nor did it prove so.

I may also observe that the best quarantine for scarlet fever is the inunction of carbolic oil (1 to 40). It is invaluable used twice a day for at least two weeks in mild cases. These cases, compared with severe cases, are much more infectious, owing to the liberty they often have, and the extreme minuteness of the infectious scales which the inunction restrains from being scattered about.

I am, Sir, yours faithfully,

Salisbury, Suffolk, March, 1881. J. SINCLAIR HOLDEN, M.D.

Mr. Thos. Holland will find, on reference to the Medical Directory for 1881, that the proper initials are appended to the name mentioned.

Mr. Richard Barker.—We must adhere to our rule.

Inquirer.—Information may be obtained from our advertising columns.

Mr. Mark Long.—D. Bogue, St. Martin's-place, London.

ARE MEDICAL MEN LIABLE TO ATTEND WHEN SENT FOR?

AN inquest was held last week in Dublin on the body of a dockmaster, who was killed by falling into the Spencer Dock. According to the evidence, as reported in the daily papers, it appears that the sister of the deceased went immediately, accompanied by a policeman, to the nearest dispensary, but the medical officer there refused to attend unless a fee of five guineas was paid. Another practitioner, however, attended at once without any stipulation as regarded a fee; but death resulted before he arrived. The jury censured in strong terms the conduct of the medical practitioner who had refused to attend the deceased, and commended the conduct of the gentleman who promptly went when summoned by the relatives. We think that in cases of accident or emergency a medical man should have very good reasons indeed for declining to attend. The public are sometimes shocked at a medical man for refusing to respond to an urgent message; they would be more shocked still if they knew how often the prompt and self-denying attendance of the medical man is never recompensed or even recognised.

Enquirer.—There is no such account in any single volume or pamphlet. Our correspondent should get the reports of some of the best provident dispensaries, as that of Northampton, Haverstock-hill, &c., and the publications of the Metropolitan Charity Organisation Society on the subject.

SILKWORM GUT.

Chirurgeon suggests the use of silkworm gut as an absorbable ligature in tying of arteries.

F. P. F.—We do not know of an institution of the kind.

Delta.—The reply will be found in our last issue, page 442.

A PLEA FOR PRESCRIBING CHEMISTS.

To the Editor of THE LANCET.

SIR,—The article in THE LANCET of Feb. 26th on the "Wrongs of Counter-practice" is sternly severe, but not more severe than just. The druggist who professes a knowledge of diseases and their treatment you characterise as a "quack," in other words as a dishonest pretender. There is no escape from the correctness of such a verdict. The prescribing chemist who honestly examines his own conduct cannot but be self-accused and self-condemned.

The moralist who looks at this subject will find much food for reflection. In England there are probably more than thirty thousand qualified chemists and druggists, the greater part of whom you say treat disease—that is, affect a knowledge which they do not possess.

This behaviour on the part of a whole class is of more than passing interest, and particularly to chemists themselves. If they were uninstructed they might be expected to have confused ideas of morality, especially if self-interest were the confusing element, but they will hardly care to escape the condemnation due to their moral obliquity by pleading ignorance of the very elements of morals. A man need not be a philosopher to understand that it is a knavish thing to profess to know that which he does not know, and still more knavish when this is done for the purpose of gaining money. Gipsies and others who tell the fortunes of maidservants for reward are sent to prison. What is the moral difference between a gipsy who professes to know the future and a chemist who professes to understand disease?

But though the case against prescribing chemists is so clear, it cannot be said that they are absolutely without defence. Their defence, as is well known, is a countercharge against medical men. They say that "medical men add the calling of a druggist to that of a physician, and as long as doctors continue to be druggists so long will druggists continue to be doctors." This is their position, and they hold it with obstinate tenacity. It is easy to see, of course, that there is no real reason in this position. A medical man who diagnoses a disease and orders suitable drugs for its treatment may surely put them into a bottle with water in a competent fashion, but it does not therefore follow that another man who may be well qualified to put drugs into a bottle with water is able also to diagnose and treat disease. The doctor includes the druggist as "the greater includes the less," but the druggist by no means also includes the doctor—no one ever affirms that "the less includes the greater."

But though in strict logic the druggist, metaphorically speaking, "has not a leg to stand upon," in the region of practical everyday ethics his case is in no sense so desperate. Let a well-spoken chemist plead his cause before a jury of his countrymen, and he will have little difficulty in obtaining a verdict of "Justifiable Retaliation." It is in the sphere of everyday morals that this problem must be solved. Shall the druggist continue to prescribe? This question is really the equivalent of another—viz., Shall the doctor continue to dispense? In discussing this latter proposition we do not enter upon a question of morals, but of expediency. The doctor's right to dispense has not been denied, nor even doubted; but, granting that it is strictly and logically right for the doctor to dispense, is it expedient? Is it not highly inexpedient—so inexpedient that, from the point of view of the druggist and the thinking part of the public, it is practically indefensible?

The one party or the other must clearly give way. Whether of the two shall it be? It will be honourable to the druggist to desist from prescribing, because he will thereby purge himself of an offence; but it will be far more honourable to the doctor to leave off dispensing, because he will thereby sacrifice an acknowledged right in order that he may perform an act of wise self-abnegation.

I will not now enter upon a discussion concerning the practicability of giving up the dispensing of medicines entirely to chemists and druggists. A few questions, however, may be offered for consideration. Firstly, what is the real function of the modern medical man? Is it not the diagnosis and treatment of disease? Secondly, what is the true function of the modern druggist? Is it not the preparation and dispensing of medicines? If this be not his function, what is? As was the old apothecary, so is the modern chemist—"Ye doctor's cooke." Do the medical men of the present time wish to be apothecaries, or do they desire to be physicians? If family doctors prefer to be apothecaries, by all means let them continue to dispense and continue to wrangle with the rival apothecaries at the chemists' shops; but if they wish to see their profession advanced in true dignity and efficiency, let them cast away this miserable relic of earlier and more ignorant times, and stand forth in their true character as physicians. If this be done, they may, with an honest conscience and a fearless front, demand the absolute suppression of "counter-practice."

I am, Sir, yours, &c.,

Grosvenor-road, N., Feb., 1881. GEO. W. POTTER, M.D. Edin.

THE CASE OF ACCIDENTAL POISONING BY MORPHIA AT THE LONDON HOSPITAL.

To the Editor of THE LANCET.

SIR,—In the report of the inquest upon a case of accidental morphia poisoning, held at the London Hospital on the 28th ult., which appears in your issue of last Saturday, an important error occurs. It is stated in your report that the strength of the lotion sent from the dispensary was only half as strong again as that prescribed. Had this been the case the mistake of the dispenser would probably have been unimportant, as a lotion containing two grains of morphia to the ounce would under the circumstances have been almost as certainly fatal as that actually used. The substitution of a drachm of morphia hydrochlorate for a drachm of the pharmacopœial solution formed a lotion containing 120 times as much morphia as was ordered.

The case was one of pemphigus of rather an acute form, which dated from three weeks prior to admission, and was under treatment in the hospital about a fortnight. The patient was a cachectic female, aged fifty. There was an extensive area on the trunk, raw or covered with thin flaky crusts of secretion in a condition very favourable to absorption, and only a small quantity of morphia was therefore ordered to be added to the lotion to allay the irritation complained of. It was found that about six ounces of the lotion were used in four applications, which would thus have contained four and a half grains of morphia each, making a total of eighteen grains applied within a period of twelve hours. It is remarkable that no symptoms of narcotism were noticed until about four hours before death. The house-physician was called to see her about 8.45 A.M., and found her deeply comatose. He had been summoned to see her an hour previously on account of some twitching in her face, which it was thought might indicate the approach of a fit. She was then noticed to be pale and cold, and rather strange in her manner. This was less noticeable on account of the patient being nearly stone deaf. She then sat up and drank some brandy. At 6 A.M. she had washed herself and attended to her toilet as usual, complaining only of some headache, and of not feeling so well. During the night she had snored much, but not more than usual. The application of the lotion had commenced from about 9 P.M. the previous evening. The patient died at 12.15 in the afternoon, or about fifteen hours after the first application of the lotion. Injections of atropine were given subcutaneously amongst other measures adopted in the endeavours to resuscitate the patient. Three injections of one-eighth of a grain were given, and finally one-fourth of a grain, with the effect of dilating the pupils, the left more so than the right, but without any effect on the coma.

Such unfortunate occurrences as this would happily appear to be rare. In the tabular collection of cases of opium and morphia poisoning in the Manual of Jurisprudence of Woodman and Tidy only two cases are included in which death resulted from the external application of these drugs: one in which death occurred ten hours after the application of thirty grains of morphia to an open ulcer of the breast (Taylor, vol. i., p. 358), and the other the case of a young man who applied a large quantity of laudanum on a poultice to the abdomen on account of a slight ailment with pain in that part (Stillé, Mat. Med., vol. i., p. 714).

An accident of this painful nature suggests the question whether it would not be desirable to discontinue the use of identical symbols for measurement of both fluids and solids. The introduction of the letters "fl." before the symbols when used for fluids, as involving more trouble, would always be liable to be omitted when unnecessary, and hence also when such a precaution might prevent a fatal error. The distinctive symbols of fluid measures might, however, be indicated without any additional trouble by writing them with a rounded summit, the corresponding symbols for measurement of solids being written with a straight line at the top.—I am, Sir, yours, faithfully,

Finsbury-square, March 9th, 1881. F. C. TURNER.

ENTHETIC DISEASE IN THE UNITED STATES.

OF the boys who were applicants for enlistment as apprentices in the United States navy during 1879 (says the *Boston Medical and Surgical Journal*) twenty per thousand were rejected on account of venereal disease, twelve of these being syphilitics.

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The American Science, Lynn Advertiser, Doncaster Chronicle, Jarrow Guardian, Marylebone Mercury, Shields Daily Gazette, Indiana Medical Reporter, Jamaica Gazette, Sheffield Town and Times, La Reforma Médica, London Figaro, Allen's Indian Mail, La Crónica Médica, Gaceta Científica, Soulby's Ulverston Advertiser, Eastern Daily Press, &c., have been received.

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